PUBLIC SAFETY CURRICULUM AND PROFESSIONAL DEVELOPMENT PROJECT

Fire Technology Curriculum

Prepared by Tonya Hilligoss, M.A.

In cooperation with Golden West College

For the Chancellor's Office,
California Community Colleges
1996

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Public Safety Curriculum and Professional Development Project

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Golden West College

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Fire Technology Subcommittee

Carl D. Perkins Vocational and Applied Technology Education Act 1991-92
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We would like to express our sincere appreciation to those public safety and education professionals who reviewed the materials developed as part of this project. They are listed in Appendix A, B, and C.

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CHAPTER I

INTRODUCTION

Fire Technology education is offered by the Office of the State Fire Marshal (SFM), the California community colleges, and the California State University (CSU) system. A main objective of this project has been to coordinate the courses provided by each to promote the smooth articulation between them. The SFM, the community college system, represented by the California Fire Technology Directors Association, and the California State University system have approved the core courses and electives presented in this document, and articulation activities are underway. Current requirements and future goals are noted throughout to emphasize the professionalization to which Fire Technology is committed. The SFM has agreed to include representation from the Fire Technology Directors Association on its accreditation committee, and negotiations between the Directors and the CSU system have produced an agreement to coordinate the curriculum to provide for the smooth transition from lower-division to upper-division coursework while further details related to accreditation are being negotiated by all three parties. The Directors have agreed that courses offered by the Office of the State Fire Marshal will be offered as elective courses, and Fire Technology educators have established minimum degree requirements and have agreed to offer two degrees, a Firefighter degree and a generic Fire Technology degree that is transferable to the California State University system. Work has already commenced to begin this process and will continue on an ongoing basis.

Chapter II is the final report of the California Fire and Emergency Management Services Standardized Professional Development Project, which is reproduced in its entirety.

CHAPTER II

THE SELECT COMMITTEE FROM THE PUBLIC SAFETY CURRICULUM & PROFESSIONAL DEVELOPMENT STATEWIDE STEERING COMMITTEE (PSCPDSSC) PRESENTS THE

California Fire and Emergency Management Services Standardized Professional Development Project

(CFAEMSSDP)

June 1996

Prepared by Ogden Associates

ACKNOWLEDGMENTS

There are so many who have contributed to the ideas and concepts, it would be impossible to list the all. This is an attempt to list those people involved directly in this project.

The Select Committee members represent various Fire Service organizations. Frank Scotti, California Community College Fire Directors Association; Mary Jennings, California Professional Firefighters; Jim Wait and Art Coda, California State Fire Marshal's Office; Tom Feierabend, State Association of Fire Educators and Bill Ogden, California State Firefighter's Association. Special thanks to Bill Lane, Chair of the Select Committee and the past president of the California Fire Technology Directors Association for his courage in putting this project forward.

Thanks to the members of the Public Safety Curriculum and Professional Development Statewide Steering Committee, and California Fire Technology Directors Association for their contributions. Tonya Hilligoss the project director for the Public Safety Curriculum and Professional Development Project. Tonie provided everything needed plus a lot of encouragement and does an excellent job of managing the project.

Also of great help were Brent Hogue, Dennis Frazier, and Bill Goss of the California State Firefighters Association, Education Committee. Another thanks to The California State Firefighters Coordinating Council and the California Fire Instructors Workshop. In spite of busy schedules they managed to find time to provide thoughts and ideas.

The collaborative effort on curriculum was provided by the following personnel:

Don Hulse	Long Beach City College
Beverly Curl	Long Beach City College
Tom Feierabend	Mt. San Antonio College
John White	Shasta College
Frank Scotti	Rancho Santiago College
Bob Halliburton	Allan Hancock College
David Senior	Allan Hancock College
Bill Lane	Allan Hancock College
Mary Girty	Allan Hancock College
Mike Collins	Fresno City College
Charlene Nagy	Miramar College
Art Cota	State Fire Marshal's Office
Terry Koeper	Southwestern College
Ed Smith	Crafton Hills College
Marc Revere	Palomar College
Dan Coffman	Rio Hondo College
Dr. Joel Gormick	Rancho Santiago College
Richard Keller	Rancho Santiago College
Teri Wann	Rancho Santiago College.

The many others who contributed to earlier versions.

Many of these ideas took form at Santa Ana College (Rancho Santiago College). Rancho is a dynamic progressive environment established by the Orange County Professional Fire Associations, Unions and Santa Ana College. The principal groups are the Orange County Fire Chiefs Association, the Orange County Firemen's Association, the International Association of Firefighters, and the College. Directly involved in establishing this environment were Ray and Donna Picard, Phil Hayden, Bill Edmundson, Marty and Marcia Thompson, Sam Winner, and Jim Reed.

Many people made major contributions during the development and implementation of the first Regional Academy concept that was established at Rancho Santiago College. Associations contributing were the Orange County Fire Chiefs, The Orange County Firemen's Association, The Training Officers Section, and the Fire Prevention Officers Section. There were many individual contributors including Marty Thompson, Sam Winner, Ronny Coleman, Leonard Marks, Joel Gormick, Bob Brunot, Tom Feierabend, Kathe Todd, Dick Keller, Teri Wann, Toinette Saul, especially George Osborn and many others.

Dan Coffman provided help in reviewing and making suggestions. More importantly he took the lead in introducing several new resolutions at the 1995 Annual Conference of the California State Firefighters Association. These resolutions will assist in the implementation of this project.

I am indebted to John Bryant of Cal Poly and Ray Shackleford of Cal State LA, for the sound advice and inspiration. They provided the insight into the future when it was most needed.

Thanks to another friend, and advisor; Billy Ogden, a Captain, Paramedic, president of his local union, and my son for his efforts and contributions. He asked tough questions, expected straight answers and debated the issues. There was also a long list of folks who took the time to read and write comments on this project.

I thank my closest friend, advisor, confidant and wife, Lori, who not only put up with the computer and me for many hours and late nights; she proofed, typed, edited, critiqued and led the cheering section as well.

Last but not least, like the quotation from California Fire Technology Directors Association, although many eyes have proofread this document errors may still be present. If one is found please send notice to the California Fire Technology Directors Association so that we can make corrections.

BILL OGDEN

Fire and emergency Management Services Degree (Basic Fire Academy)

Pre-requisite: English and Mathe Placement Test

Course Number	Course Name		Units
FIRE 1	FIRE PROTECTION ORGANIZATION	3	
FIRE 2 (F-5)	FIRE PREVENTION		3
FIRE 3 (F-6)	FIRE PROTECTION EQUIPMENT AND SYSTEMS		3
FIRE 4 (F-3)	BUILD. CONST. FOR FIRE PROTECTION		3
FIRE 5 (F-4)	FIRE PROTECTION EQUIPMENT AND SYSTEMS		3
FIRE 6 (F-2A)	HAZARDOUS MATERIALS/ICS		3
		SUB-TOTAL	18

Prerequisite for Basic Fire Academy:

EMT	STATE CERTIFIED		
PE-F	PHYSICAL FITNESS		2
PE-T	PHYSICAL AGILITY		
FIRE 86	BASIC FIRE ACADEMY		10
		TOTAL	30

Fire and emergency Management Services Degree
(Fire and Emergency Management Services Degree)

Prerequisite: English and Math Placement Test

Course Number	Course Name	Units
FIRE 1	FIRE PROTECTION ORGANIZATION	3
FIRE 2 (F-5)	FIRE PREVENTION	3
FIRE 3 (F-6)	FIRE PROTECTION EQUIPMENT AND SYSTEMS	3
FIRE 4 (F-3)	BUILD. CONST. FOR FIRE PROTECTION	3
FIRE 5 (F-4)	FIRE PROTECTION EQUIPMENT AND SYSTEMS	3
FIRE 6 (F-2A)	HAZARDOUS MATERIALS/ICS	3

SUB-TOTAL 18

ELECTIVES: SELECT FOUR COURSES 12 UNITS FORM THE FOLLOWING
(12 UNITS FROM EITHER THE ELECTIVE OR ADDITIONAL ELECTIVE COURSES)

FIRE 7 (F-11)	FIRE APPARATUS AND EQUIPMENT	3
FIRE 8 (F-9)	FIRE HYDRAULICS	3
FIRE 9 (F-10)	FIRE INVESTIGATION	3
FIRE 10	RELATED CODES AND ORDINANCES	3
FIRE 11 (F-7)	FIREFIGHTING STRATEGY AND TACTICS	3
FIRE 12 (F-8)	FIRE COMPANY ORFN. AND MANG.	3
FIRE 13	PUBLIC SAFETY RECORDS AND REPORTS	3

SUB-TOTAL 12

ADDITIONAL ELECTIVES: SELECT SIX COURSES FORM THE FOLLOWING
(12 UNITS TOTAL)

FIRE 20	FIRE INSTRUCTOR 1A	2
FIRE 21	FIRE INSTRUCTOR 1B	2
FIRE 22	FIRE INSTRUCTOR 2A	2
FIRE 23	FIRE INSTRUCTOR 2B	2
FIRE 24	FIRE INSTRUCTOR 2C	2
FIRE 30	FIRE MANAGEMENT	2
FIRE 31	FIRE MANAGEMENT 2A	2
FIRE 32	FIRE MANAGEMENT 2B	2
FIRE 33	FIRE MANAGEMENT 2D	2
FIRE 34	FIRE MANAGEMENT 2E	2
FIRE 40	FIRE PREVENTION 1A	2
FIRE 41	FIRE PREVENTION 1B	2
FIRE 42	FIRE PREVENTION 1C	2
FIRE 43	FIRE PREVENTION 2A	2
FIRE 44	FIRE PREVENTION 2B	2

FIRE 45	FIRE PREVENTION 2C	2
FIRE 50	FIRE COMMAND 1A	2
FIRE 51	FIRE COMMAND 1B	2
FIRE 52	FIRE COMMAND 2A	2
FIRE 53	FIRE COMMAND 2B	2
FIRE 54	FIRE COMMAND 2C	2
FIRE 55	FIRE COMMAND 2D	2
FIRE 56	FIRE COMMAND 2E	2
FIRE 60	FIRE INVESTIGATION 1A	2
FIRE 61	FIRE INVESTIGATION 1B	2
FIRE 62	FIRE INVESTIGATION 2A	2
FIRE 63	FIRE INVESTIGATION 2B	2
FIRE 65	PUBLIC EDUCATION	2
FIRE 68	TITLE 19/24 WORKSHOP	2

SUB-TOTAL 12

TOTAL 30

Chapter 1 PUBLIC SAFETY CURRICULUM AND PROFESSIONAL DEVELOPMENT PROJECT

The Public Safety Curriculum and Professional Development Statewide Steering Committee (PSCPDSSC)
The Public Safety Curriculum and Professional Development Project is a joint statewide education effort of police, fire, environmental technology haz mat, and corrections professions. The Public Safety Curriculum and Professional Development Statewide Steering Committee (PSCPDSSC) manages the project.

The public safety coalition is making a united effort to maintain training curricula consistent with changes required by modern society and professional development. To achieve this effort coalition members applied for and received a grant. The purpose of this grant is to develop a standardized curriculum for the professional growth of the individual professions participating in the coalition.

The select committee
The Public Safety Curriculum and Professional Development Statewide Steering Committee sought out member representatives from various fire organizations to form the select committee known as the fire and emergency management services curriculum project committee. The goal of the project is professional development. The goal is directly related to the needs of public safety professions and to legislation that requires the upgrade of vocational programs.

The select committee consists of members of the public safety curriculum and professional development statewide steering committee. The select committee represents various fire organizations. Bill Lane, and Frank Scotti, California Community College Fire Directors Association; Mary Jennings, California Professional Firefighters; Bill Ogden, California State Firefighters Association; Jim Wait, California State Fire Marshal's Office; and Tom Feierabend, State Association of Fire Educators.

The fire and emergency management services curriculum project committee selected Bill Ogden to function as the writer and researcher for this project. Bill Ogden has extensive experience in the origination and development of the California Community College fire technology program.

By direction of the committee, Bill Ogden was to prepare an ideal or most desired model to provide Fire Techology educators with a clear objective even if that cannot be immediately achieved. This model California standardized fire protection degree program will illustrate the basic associate of arts/sciences degree. Designed for pre-entry level fire fighters, the program is the first level degree program. It also establishes the foundation for post employment degree options for employed firefighters.

California state fire training
The California state fire academy and the California fire service certification programs are part of the California State Fire Marshal's Office. Fire training programs were designed by the fire service as vocational education courses and programs. Delivery of these vocational education courses and programs were through a variety of methods including the community college system and supervised by the State Fire Marshal's Office.

Transition from vocational training to professional development
The program developed through this project is known as the California fire and emergency management services professional development program. The components of the project are taken from existing community college and the state fire training curricula. The new program begins the transition from a vocational to a professional development program.

Fire Technology

One of the major weakness of vocational courses and programs is their failure to transition from vocational training to articulated professional development programs. The failure to articulate represents a serious block to the professional development of fire service personnel. Historically the California state fire training program has not been successful in the transition from a vocational education program to a statewide standardized professional development program.

The major reason for the lack of transition or standardization is the lack of resources. Lack of sufficient resources forces the California State Fire Marshal's Office to concentrate on the certification courses. The Community College Chancellor's Office also has not had sufficient resources. Adequate resources would have permitted the Community College Chancellors Office and California State Fire Marshal's Office to coordinate with the colleges and universities in the development of the professional development program.

The Public Safety Curriculum and Professional Development Project provided a new opportunity to achieve the goal of a standardized academic professional development program.

The progress of vocational training into recognized professional development
Changes in federal and state legislation now in essence mandate the end to vocational training as we now know it. Although the training will continue in other fashions, the competition for grant money will increase substantially. There will be important changes in future grant requirements. The vocational and applied technology education act and other legislation make it increasingly difficult for individual districts to compete for grant resources. Large coalitions, with several colleges as members are more likely to be successful in the quest for grants.

The fire service must grow to keep up with technological and sociological change. This growth includes a standardized academic professional development plan. Implementation of this project will encourage broader participation of colleges in grant requests. Increased participation will increase leverage in the pursuit of adequate resources to maintain and make future developments a reality.

Project goals

1. To meet the education needs of public safety professions related to current professional duties and responsibilities.
2. To accommodate the need to transition the present system of vocational training to a recognized academic professional growth program.
3. To establish a standardized academic professional development program for fire service personnel.

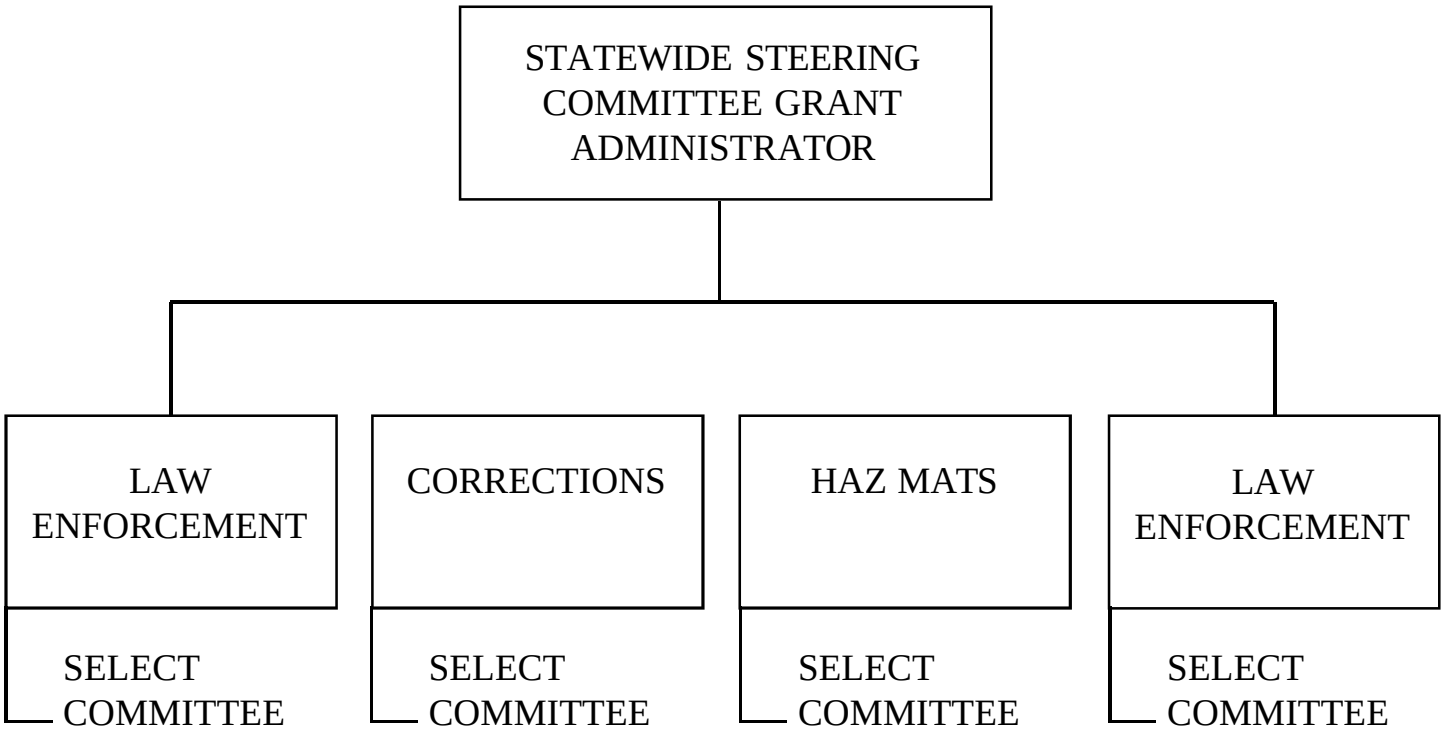
Project aim
This project is the first phase of several proposed future projects that will:

1. Develop a plan for a standardized entry level community college curriculum for statewide implementation, consistent with goals of the Public Safety Curriculum and Professional Development Project.
2. Review and update the career track for the fire professional.[1]
3. Establish a foundation for baccalaureate, masters, and doctorate degrees.
4. Identify methods to accredit and integrate existing and historical education.
5. Analyze existing community college, state fire training, and apprenticeship curricula and programs, and integrate where possible the courses to train police, corrections, fire and hazardous materials personnel.
6. Analyze the utilization of national professional standards in existing curricula and programs.
7. Develop a standardized accreditation process that will support and maintain standardization of curriculum through communication and participation.

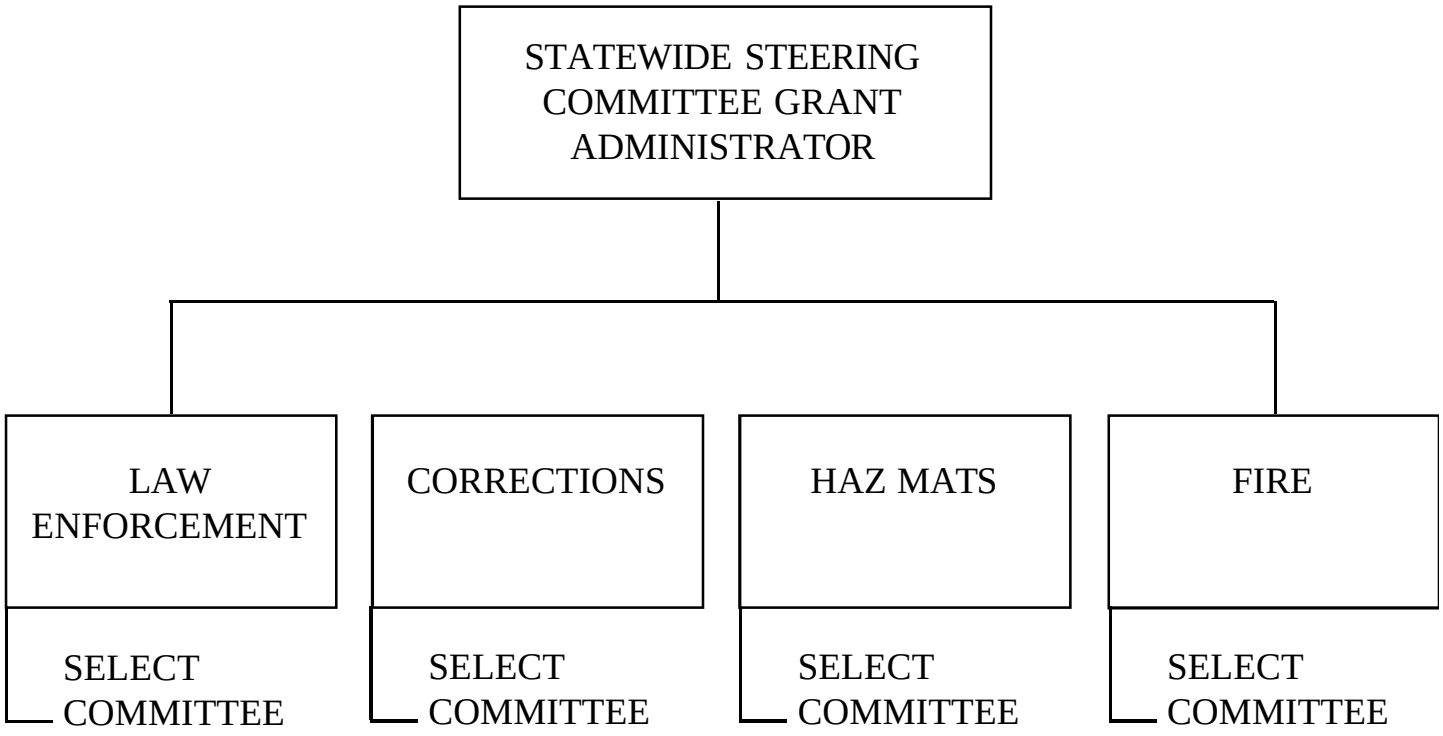
[1] **See Professional in Appendix**

8. Formalize the administration processes necessary to maintain a standardized curriculum.
9. Adapt existing and develop, where necessary, curricula for the California fire and emergency management services standardized entry level degree program.
10. Include curriculum relating to risk management for employees and employers.

PUBLIC SAFETY CURRICULUM & PROFESSIONAL DEVELOPMENT STATEWIDE STEERING COMMITTEE



PUBLIC SAFETY CURRICULUM & PROFESSIONAL DEVELOPMENT STATEWIDE STEERING COMMITTEE



PUBLIC SAFETY COALITION

Chapter 2 HISTORICAL PERSPECTIVE OF FIRE SERVICE TRAINING AND EDUCATION

The 1920's

In the 1920"s the educational opportunities were mainly on-the-job training for firefighters and fire officers. A few fire protection engineers attended the Armour Institute of Technology that later became the Illinois Institute of Technology in Chicago, Illinois.

The 1930's

In the 1930's a two year Fire Protection Technician curriculum was offered at Oklahoma A and M in Stillwater, Oklahoma. This program was later changed to a two year course with a four year option for a Baccalaureate in Fire Protection and Safety Technology at Oklahoma State University at Stillwater, Oklahoma.

About this same time, Chief Ralph Scott of Los Angeles City Fire Department, was working with the International Association of Fire Chiefs and the Federal Vocational Board to upgrade the profession. He obtained funds to perform a job analysis of the Fire Services Occupation that was published in 1931.

About 1935 the George-Dean Act provided the funding for employment of Vocational Training Instructors throughout the country and included the fire service. This training continued until the late 1940's with an interruption for W.W.II.

The 1940's

Returning GI's wishing to upgrade their formal education to pursue careers as professional firefighters were frustrated to find only the two programs, one at the Illinois Institute of Technology and the Fire Protection Technician Program at Oklahoma A and M.

The 1950's

In 1950, Chief John Alderson of the Los Angles City Fire Department led a group of other fire chiefs in the same region and approached the University of Southern California and persuaded them to offer a program in Fire Administration in the School of Public Administration.

This program offered a Bachelors degree, a Masters degree and a Doctors degree with specialization in Fire Administration. This program did well for about ten years. Most students were attending courses under the GI Bill. Costs became excessive and the project ran out of funding. USC understood this and actively supported the transfer of the educational effort to the public school junior college system even during its peak years.

In about 1953 a community college in East Los Angles started the Fire Science Program. Soon there were 50 AA/AS programs in the State of California.

In 1952 as a part of his doctoral dissertation at the State University of New York, Dr. Leonard Silvern performed a job analysis for the position of Fire Chief.

Building on Dr. Silvern's work, a proposal written at the University of Southern California calling for the establishment of a four year baccalaureate program at San Jose State College in Fire Administration. The program was a good one, however, unfortunately there were insufficient numbers of students at the AA/AS level to support it.

The 1960's

California has led the nation in Fire related AA/AS degree programs for many years. In the 1960's, California began the implementation of the Fire Service Certification Program. One third of the total number of AA/AS degree programs in the nation are located in California. This is not accidental but rather directly related to the advanced degree program at University of Southern California. The graduates of that program advanced and have led the way in the quest of professionalization.

In 1966, a group of fire service leaders met in Racine, Wisconsin at the Wingspread Conference. The work of these leaders at this conference began the quest of professionalism by the Fire Service. The Conference called for higher education of the fire service and a deliberate education of the fire system managers.

At about this same time in California a new Study of the Firemen's Occupation was conducted. This study included a survey of large, medium, and small fire departments, organized to determine what tasks were being performed and to what levels.

Using the information from the Occupational Analysis a recommended community college curriculum developed. However this curriculum was not standardized state wide, because of costs and to a large extent resistance to accept the merger of in-service, apprenticeship and college training.

The 1970's

Much work has been accomplished during the ensuing years. Yet there is still more work to be done. One of the first steps was in 1970, when a meeting of national representatives agreed to the establishment of the Joint Council of National Fire Service Organizations, which established these goals:

"To develop nationally recognized standards for competency and achievements of skills development, technical proficiency and academic knowledge appropriate to every level of the Fire Service Career Ladder."

The Joint Council then established the Professional Qualifications Board. [Bo1][1] The Board worked in alliance with the National Fire Protection Association. The responsibility of the Professional Qualifications Board was to determine which jobs within the fire department should have standards, and then create a logical corresponding career ladder showing the progression from firefighter to fire officer. Each rank is associated with a specific set of related professional standards. These Standards are set forth in the National Fire Protection Association Standards, 1001, 1002, 1003 et al.

The Professional Qualifications Board established the guidelines for certifying achievement of these standards. While they did not set a standardized testing or validation process, they did set the goals of: **Uniformity, Consistency and Validity**.

In California, during the early 1970's, law enforcement had established its' POST program. The Fire Service had rejected the opportunity to participate in the POST program and had no source of educational funding. The Fire Service tried to establish a source of training funding on its own. The Legislature soundly rejected this plan and instead passed SB 456, which essentially directed the Fire Service to utilize the Community Colleges as its source of education and training.

The plan worked well. There was a community college within a short distance of almost every fire department thus making the delivery of the training, quick, reliable and paid for through the community college system. The real difficulty began when the professionalization of the fire service began to manifest itself.

In 1974 NFPA adopted NFPA Standard 1001, The Standard for Fire Fighter professional Qualifications. The first giant step taken, work began in earnest all across the country. In 1975 a BS program in Fire Protection Administration opened at California State University-Los Angeles. Similar programs were begun at California State Universities at Long Beach and Sacramento. [2]

Efforts to utilize the "One Thousand Mile Campus" capability of the California State University System was without success. The National Fire Administration has established the Open University System, serviced in California by Cogswell University. These programs were frustrated by the small number of student that were able to matriculate to the upper division programs.

The 1980's

In 1981 California initiated the Fire Officer Certification Program and by 1985 the certification of Chief Officers was underway. These programs should have been a part of the upper division schedule in the universities. Several different things helped to block the growth of the upper division programs. The major problem has been the lack of articulation of the fire science and fire technology courses.

The Community College education and training system worked almost too well. Urbanization created many new fire service positions. Utilizing the community colleges the fire service was able to meet the needs created by rapid growth and to take what seemed to be major steps toward professionalization.

Problems relating to accreditation and articulation cause the under utilization of the upper division universities.
The under utilization of upper division programs forced the over use of the community college system. The result was the delivery of upper division level curriculums in the community colleges.

Universities were unable to break with tradition and create a flexible delivery system capable of meeting the needs of the candidates within the fire service. Most of these programs required students to attend classes on campus, thus creating massive transportation and cost problems. The inability of one university to deliver the programs statewide compounds the issues related to the numbers of students available to maintain class size and regular program scheduling. The advent of computers, television, down links, and interactive teaching capabilities may solve these problems.

The 1990's

Now in the 1990's the work of integrating the professional standards, certificate and certification programs into standardized degree program/s for the colleges and universities in the State of California has begun. The merger of these various elements will require much work and effort, however it is achievable.

In examining the California State Fire Training Program, apprenticeship, college and university catalogs, certification, certificates and degrees all exist. Distracting from the achievement of implementing professional standards, is that certification, and certificate programs are not integrated uniformly with degree programs. (The result is that a degree, certificate or certification from one institution does not require the same effort as a degree, certificate or certification from another institution.)

Another purpose of this project is to create the standardized degree model to establish and maintain the standardization of Fire Service Degree Programs in California.

LADIES AND GENTLEMEN; WE ARE BEHIND!

Chapter 3 IMPLEMENTATION STRATEGIES

Fire programs have been in the California Community Colleges since the late 1950's. Attempts at standardizing the curriculum have existed almost as long. It is not clear why the curriculum has not been standardized statewide. Some of these reasons relate to finance, the absence of clear authority, delegation of responsibility, adequate numbers of students, inadequate staffing and inter-district competition. Few if any of these attempts at standardization focused on standardization through the delivery system.

This project is believed to be the first to approach the solution through a program of transition. The transition from vocational training to an academically recognized professional development system.

COMMUNITY COLLEGE CHANCELLOR'S OFFICE
The first step is to coordinate the project with the Community College Chancellor's Office. The goal is for increased participation and support. The Office has been very supportive in this project. It is hoped that resources will permit the continuance of this practice.

Currently both the State Fire Marshal's Office and the Community College Chancellors Office are involved in the process of accreditation. Both of these agencies are currently under funded to adequately meet the needs of the necessary standardized accreditation process. One of the goals of the Fire Technology Directors Association is to add resources to the educational system.

STATE FIRE MARSHAL'S OFFICE
The second step is to integrate this program with the State Fire Marshal's Office, State Fire Training and the regional academy practices. The State Fire Marshal's staff was involved in the project and it is hoped that the project will be accepted and adopted by the Marshal.

CALIFORNIA FIRE TECHNOLOGY DIRECTORS ASSOCIATION
The third and most active component is the California Fire and Emergency Management Services Accreditation Assessment Process. The curriculum and Accreditation Assessment Process's are through the California Fire Technology Directors Association (CFTDA). The curriculum program assists in keeping the program up to date and content valid. Accreditation Assessments provide accountability, consistency, coordination, and credibility of all colleges offering courses in California Fire and Emergency Management Services. Institutions and agencies participating in the CFTDA accreditation process will enjoy cost effective course and program revisions with current updates

CFTDA CURRICULUM REVISION PROCESS
A part of the Public Safety Curriculum and Professional Development Project is a methodology designed to maintenance the standardized curriculum. The California Fire Technology Directors Association (CFTDA) coordinates this function through the colleges and universities as part of the educational delivery system. Primarily, the system expedites the process of transition from vocational training to professional development. It also organizes the process of curriculum development and revision. It eliminates many obstacles by adding resources to the system.

The purpose of CFTDA in this project is to function as the gateway organization to the Standardized California Fire and Emergency Management Services Education and Degree Programs in the State of California. This proposed accreditation project is not designed to be an enforcement program. It is designed to be a valuable communication and training system for members of California Fire Technology Directors Association. As primarily a training process it is an asset to the California Fire and Emergency Management Services Professional Development Program.

ENTRY LEVEL FIREFIGHTER AND FIRE PROTECTION SPECIALISTS PROGRAMS
This project contains the necessary curriculum to establish a state wide standardized curriculum for the Entry Level AA/AS degree for Fire Fighters and includes non-firefighting degree for the Fire Protection Specialists. The California Fire Technology Directors Association is committed to continue the transition of the various officer and specialist programs.

DEGREES
In this initial phase, the first step for the Fire and Emergency Management Services Professional Development System, is the formation of California Standardized Entry Level Fire Protection AA/AS Degree Program. The primary delivery of this program will be the California Community College System and articulate to the university systems. The curriculum in this new program will incorporate elements from existing Community College Programs, California State Fire Marshal's Office Training Programs, California Joint Apprenticeship Programs, Fire Agency Training Programs and other relevant sources.

FIRE PROTECTION SPECIALIST
Included in the project is a professional growth program. This program is for those candidates wishing to pursue a career in fire protection, separate from firefighting. These opportunities do exist and the numbers of these positions will probably increase.

ADVANCED DEGREES
The project Includes foundation design link for future improvement of the Baccalaureate, Masters, and Doctorate Degrees. Development of the advanced degree's is a project that is expected to occur in a later phase of the PSCPDSSC Project.

DATA GATHERING AND COMMUNICATIONS
Periodic meetings of members of the California Fire Technology Directors Association with representatives of the California Fire and Emergency Management Services professional components, sections and groups will provide necessary information to assess and adjust curriculums when necessary. The Directors will also conduct their own meetings and participate in accreditation visits. The purpose of these visits is to perform Accreditation Assessments. These and other relevant processes will assist in keeping the curriculums standardized, relevant, and current.

ACCREDITATION ASSESSMENT CONCEPT
The concept of Accreditation Assessments is a vital part of Standardization and is well within the scope of this project. For example: presently many courses are offered that do not meet the requirements of AB1725, Title V, or articulation requirements. Courses that dead end in the certificates or that will transfer only as elective units to upper division institutions are not supportive of professional growth. The effect of recent legislation has put an end to Vocational Education as we once knew it.

Accreditation Assessments are necessary for statewide uniformity. The purpose of these assessments is to maintain standardization of the California Fire and Emergency Management Services Professional Development Program.

FUTURE IMPACT
The need for training in the California Fire and Emergency Management Services is going to increase in order to meet the needs required by technological and societal change. Reduced training and operational budgets' places greater emphasis on standardization of curriculum. At the same time the need to deliver training at the local or regional level will also increase.

Standardization of programs, enhancement of the educational delivery system, and modernized facilities are required to meet the needs of several public safety professions. The purpose of the Public Safety Curriculum and Professional Development Project is achieve these goals for a joint statewide education Coalitions of Police, Fire, Haz/Mat, and Corrections fields. The project is funded by a grant, and managed by the Statewide Steering Committee. The formation of the Public Safety Coalition is the foundation of this effort.

THE GOAL OF THE STANDARDIZED PROFESSIONAL DELIVERY SYSTEM

The standardized curriculum project and the enhanced educational delivery system are an integral part of a future project, a proposed Public Safety Bond Issue of 850 million dollars. The purpose of the Bond Issue is the establishment of a standardized education program.

Another component of the project is the delivery system. A training delivery system capable of meeting the diverse needs of the Coalition of Police, Fire, HAZ mat, and Corrections professions in California.

THE DELIVERY SYSTEM

Voter approval of the proposed Bond Issue would provide for the development of the delivery system that utilizes modern technologies, computers, satellites, and electronic classrooms. Included in this proposed plan are facilities as regional public safety training centers throughout the state of California. Regional centers are to be equipped with the standardized curriculum and modern technologies. Modern regional centers will enable the delivery of necessary standardized training and education to all members of the professions represented in the coalition.

The design of these proposed centers will further enhance the delivery of this educational project. Centers are planned to be either a single complex or mobile or a combination of both and will facilitate delivery by television and incorporate interactive computer technologies.

Although the Standardized California Fire and Emergency Management Services Degree Project and the proposed Bond issue are technically not related. The bond issue is a sequential goal, calling for the simultaneous construction of facilities, then implementation and delivery of standardized training and education on a statewide basis.

Included is the utilization of the most modern technology to facilitate the delivery of uniform training on a professional level throughout the state. One of the foundation elements of the project is the requirement of standardized professional curriculums. Standardization of curriculum permits cost effective development of visual aids and interactive computerized educational techniques.

OBSTACLES

There appears to be one obstacle that remains to be solved. There are differences that exist on the Accreditation Assessments. These differences are with the State Fire Marshals Office and center around the perception that the Accreditation Assessments infringe on the process of Regional Academy Accreditation.

During the development of this project great care was taken to keep the Accreditation Assessment process of this project within the scope of colleges and universities to standardize curriculum and programs. It was felt that Regional Academy Accreditation is a separate issue controlled by the State Fire Marshal's Office. The combining of the two processes were discussed. The object of these discussions was to strengthen both processes by adding the resources of the Directors Association to assist the Marshal's Office and to combine and improve the process.

Both the State Fire Marshal's Office and the Directors Association have agreed to meet together and work out these differences.

Accreditation is essential to standardization. The California Fire Directors Association looks forward to resolving the differences that exist on Accreditation Assessments and to the achievement of a unified leadership in attaining the goals of this project. The Directors recognize and respect the many contributions of the Marshal's Office. The focus of the Directors is to eliminate false perceptions and to work toward making changes necessary to maintain harmony in the system.

Chapter 4 AN EDITORIAL ON PUBLIC EDUCATION

PUBLIC SUPPORT

The modern fire protection system depends on public support. Adequate fire protection requires resources and money. Obtaining adequate resources for fire protection is difficult unless the process is supported by the public. Public support depends on the education of the public. The public should understand the job and the resources needed to provide adequate fire protection system. The public looks to the Fire Service for the knowledge they need about Fire Protection. Recognized professional status is an important element of the publics trust in the Fire Service.

The reverse is also true, the education system depends on public support. The California Standardized Fire Service Professional Development Project provides the educational foundation for professional recognition.. The public's background in fire protection, prepared by a sound public education program, is the key to the public supporting the system.

Public recognition of the mission of the Fire Service is critical to public support. Public support is essential to proper funding of both the operational and educational aspects of Fire Protection.

PROFESSIONALISM

Professional recognition provides protection to the public, the fire protection system, and firefighters. During times of austerity, professionalism provides protection when making decisions effecting fire protection. When threatened with unreasonable or unsafe cuts that may be contrary to sound professional standards, necessary action is required. Leadership expressing caution, based on validated quantitative and qualitative professional analysis speaks much louder and clearer than individual opinion regardless of individual stature.

TRAINING AND EDUCATION PROGRAMS

The Professional Fire Services are dependent upon a strong training and education program. The professional education program relies on public support of the Fire Protection System. Efficiency and effectiveness are the result of professional practices. Service levels are reflected in the education system as well as the professional standards. Good management practices demonstrate effectiveness in the work place. Reflecting the same issues in the education programs can increase public support of the Fire Service.

PUBLIC RECOGNITION AND INFORMATION

The members of the Fire Services should take an active role in informing the public of adequate fire protection standards as well as outstanding accomplishments. Standards address such issues as what is expected of the fire department, what is a firefighter and what is expected of them, what is an adequate response to a fire?. A more important standard might address the safety of home and community.

Accomplishments of individuals, agencies, and the service itself should be lauded through the public information system. Information can be given through press releases, public education programs, and a variety of other public programs.

It is essential that these concepts be reflected in the professional and public education programs. The objective of this type of training is to make every citizen aware of the benefits of a good Fire Protection System.

Chapter 5 PROGRAM MANAGEMENT

The college and local fire agencies are responsible for the management of the local Fire and Emergency Management Services Professional Development Program. School employee's perform the management functions, while local fire agencies provide advice and guidance for program content through the Advisory Committee. This close association between advisory committees and the local Director provide statewide input into the program.

To take advantage of this statewide standardized curriculum, a school and local fire officials' volunteer to participate in the California Fire and Emergency Management Services Curriculum and Professional Development Project.

To receive an approved Accreditation Assessment, the school agrees to cooperate with the intent of the project and to meet the program criteria. The school agrees to utilize the Fire and Emergency Management Services Professional Standard Curriculum. California State Fire Marshals Office must approve the institution for delivery of Fire Training. They must also meet the state wide minimum standards and polices of the State Board of Fire Services. The agreement is to support the Accreditation Assessment, and the curriculum development and revision process set forth in the California Fire and Emergency Management Services Professional Development Project.

The project identifies and sets forth the statewide minimum standards for college and university programs offering California Fire and Emergency Management Services programs. Local fire agencies may have unique fire protection conditions and require a higher level of standard than provided by California Fire and Emergency Management Services Professional Development Project. When local needs require higher standards, a training and education program may adopt such curriculum in order to meet the higher standards of the local Fire Agency or agencies.

When there is a justifiable need to meet local requirements, colleges may adopt curriculum that exceeds statewide minimum standards. In jurisdictions where departments may have higher standards, the California Fire and Emergency Management Services Professional Development Project is the standard for the Accreditation Assessment Process. This policy will ensure that all Accreditation Assessments remain uniform and utilize the same standard.

It is recommended, that Agencies utilizing higher standards, not utilize these higher standards in the entry level hiring process. Maintaining the statewide standards is substantial savings to candidates and the training agencies. This policy will eliminate the need to provide special classes for students trained in programs other than the local college or agency. It is further recommended that training required to meet higher standards be conducted after hire as post employment training. These special classes would not affect the Accreditation Assessment provided that the additional classes did not deteriorate statewide minimum standards of the standardized curriculum.

When local requirements are greater than the Statewide minimum standard, local fire agency standards must be in addition to the state wide minimum professional standards. It is the intent of this policy that all firefighters must meet the skills and knowledge's of the basic courses based upon statewide minimum standards. Where higher standards are necessary, this knowledge and/or skills must be beyond the California Fire and Emergency Management Services Standard Curriculum.

Higher standards in the hiring process require additional training for candidates trained to minimum requirements. Fairness requires providing an opportunity to acquire the training necessary to meet the higher standards. This is to ensure that candidates compete equally.

Proper program management promotes modernizing local training standards. Program management depends on the professional guidance of the local Fire Advisory Committee. Advisory Committees are to consider carefully any recommendations to change curriculum that might impact the ability of entry level candidates to compete evenly and fairly.

COURSES
All course curriculum and degree programs must include statewide minimum standards. Minimum standards as defined by the California Fire and Emergency Management Services Curriculum and approved by the California State Fire Marshal's Office and the State Board of Fire Services.

Local level curriculum and programs exceeding these standards, are approved by the local Fire Advisory Committee. Revisions, corrections, or additions at the local level may exceed state wide standards but must not diminish the standard.

Required courses for the basic degree, are broad and introductory in nature and contain core information related to advanced degrees. These courses are job related. Job related skills and/or knowledge 1s used in the performance of the firefighter duties and responsibilities.

When there is a question of validity, duties and responsibilities should be validated by a Guidelines Oriented Job Analysis (GOJA) process. The GOJA forms the foundation for this curriculum project. The Occupational Analysis and Career Development Guides adopted by the California State Fire Marshal's Office (CSFMO) and California State Board of Fire Services (CSBFS) should be linked to the GOJA.

The basic Fire and Emergency Management Services Degree represent a core program and foundation for advanced degrees. Students complete the Entry Level Fire and Emergency Management Services Degree before entering the advanced degree programs.

TEXTS
Text books are a part of the course outline. The Select Committee of the Public Safety Curriculum and Professional Development Statewide Steering Committee and the California Fire Directors Association (CFDA) are responsible for the curriculum development and revision process. The development and revision process serve to keep the California Fire and Emergency Management Services Curriculum up to date. This process includes the selection of text books, and is based on the following criteria.

GUIDELINES FOR SELECTING TEXTBOOKS.
A California Fire and Emergency Management Services statewide textbook, must meet one or more of the following criteria:

1. Nationally recognized texts, published within the last five (5) years, are desired. A nationally recognized text is one that is (1) marketed nationally, (2) utilized by other institutions, (3) endorsed by professional organizations or agencies.
2. Where there is no suitable nationally advertised text, consider texts from one or more of the following options. (1) The National Fire Protection Association (NFPA) Handbook, (2) NFPA Professional Standards, (3) NFPA Codes, (4) International Fire Service Training Association (IFSTA) Training Manuals, (5) International Association of Fire Chiefs (IAFC), (6) California Joint Apprenticeship Program (CALJAP), (7) International Association of Fire Fighters (IAFF), (8) International City Managers Association (ICMA), and (9) Recommendations from other professional groups may also be considered as the primary text.

3. Where secondary texts enhance the primary text, the criteria for primary texts applies. Secondary texts meet specific local or regional requirements. They may include instructor notes or pamphlets. The preference is for texts recommended for adoption by Colleges or Universities. Recommendations of texts are by The State Fire Marshal's Office, or the California Fire Directors Association
4. Should the recommended text be out of date (older than 5 years), the recommendation of the selection committee should note this, and may require a secondary text.

   All texts utilized in the Fire Training Programs and courses including general education texts, must be reviewed by the local Fire and Emergency Management Services Advisory Committee.

TESTING
Course evaluations, testing and assessment processes are performance based, correlated with the Guidelines Oriented Job Analysis and conducted in accordance with college testing procedures. Performance based testing and assessment processes are encouraged as they become learning and motivational experiences for candidates. Participation in the testing and assessment processes assists in developing an appreciation and understanding of job requirements.

Testing and assessment processes are developed based upon existing generic academic models. These processes become job specific and replace non-job related generic models.

FACILITIES
Adequate and appropriate facilities are required for safety and proficiency in Fire and Emergency Management Services Training. It is recognized that there is a substantial shortage of proper facilities in fire training.

Institutions intending to provide applied Fire and Emergency Management Services training must show evidence of approved facilities. Facilities may be on loan, owned or leased. Facilities must meet safety standards and be approved by the California State Fire Marshal's Office and the State Board of Fire Services.

Where adequate facilities do not exist and/or are not available, authorization may be obtained for temporary training status. Temporary training status is obtained by renting or leasing necessary facilities from other institutions or agencies. Temporary training status requires the requesting institution to have long range plans for the construction or acquisition of permanent facilities.

APPARATUS
Institutions wishing to provide courses requiring apparatus must show evidence of possession loan, rental or lease agreement for apparatus appropriate to the course content.

EQUIPMENT
Personal safety equipment for both students and instructors must be provided in addition to instructional equipment. Uniforms and other personal gear are the responsibility of the student.

INSTRUCTOR LOADS
It is recommended that class size for a single instructor shall not exceed thirty-five (35) for lecture, 20 for lab and 5 for skills' classes. Where enrollments exceed these maximums, additional instructors or instructional assistants are recommended to meet class size requirements.

For skills' demonstration classes a ratio no greater than five students to one instructor or instructional assistant is recommended for safety purposes.

Fire Emrg Mgt Services

Degree Program Management

ACCREDITATION

CFTDA

SPECIAL COURSES AND PROGRAMS

Special training courses and programs may be approved by the local Fire Services Advisory Committee. Courses or programs may meet the needs of students wishing to take Fire and Emergency Management Services Courses, but do not intend to be employed in a position requiring the physical capabilities of a firefighter. These special programs lead to other than Fire and Emergency Management Services degrees. These degrees or certificates are called, Fire Protection Specialist, Public Safety Technician or other designation, but in no case are they to lead to the Fire and Emergency Management Services Degree.

WHY ACCREDITATION ASSESSMENTS?

The purpose of Accreditation Assessments is to standardize curriculum across the state. There are fifty-eight (58) community colleges offering courses and or programs in Fire training and education. Presently, the system suffers from a lack of sufficient coordinated effort between the Community Colleges, the Community College Chancellor's Office and the California State Fire Marshal's Office. For example, the State Fire Marshal's Office Regional Academy Accreditation Program deals with less than fifteen (15) of the colleges or agencies. The current lack of standardization in all of the fifty-eight (58) programs, demonstrates that accrediting 25% or fewer of the programs is inadequate.

The curriculum offered by these fifty-eight (58) college, including the approved Regional Academies, is not standardized. Some of the curriculum being used is out of date and antiquated. This is a disservice to both the students and to the colleges involved. This alone is reason enough to support the transition from vocational training to recognized academic professional growth.

California Fire Directors Association under the direction of the Public Safety Curriculum and Professional Development Statewide Select Committee, self assumes the Accreditation Assessment responsibility for colleges and universities. This includes assistance to colleges, universities, and other agencies in program implementation and the self assessment process. CFDA will validate these findings through on site visits to colleges, universities, and other agencies providing college credit for Fire and Emergency Management Services Education.

Accreditation models were used as resources in the development of the California Fire and Emergency Management Services Accreditation Assessment Model. These models included, but not limited to the (1) Accreditation Ad Hoc Subcommittee; (2) IFCA (International Fire Chiefs Association) model for fire department accreditation; (3) The Regional Fire Academy model from the California State Fire Marshal's Office. (4) The Community Colleges W.A.S.C. Model. (5) The International Fire Service Accreditation Congress and others

The purpose of the Accreditation Assessment process is to provide equally for students and employers though a standardized professional development curriculum and delivery system. The Accreditation Assessment will validate standardization and assure adherence to the statewide curriculum model, adequacy of facilities, staff and equipment. The use of teams of peer professionals selected from CFDA also promotes participation in the model development process.

Standardization of degrees and related curriculum, ensures compliance with aspects of the law. Legal requirements such as the Fair Labor Standards Act, Title V of the California Education Code, AB 1725 et al.

It is the goal of the California Fire Directors Association to integrate this model with the California State Fire Marshal's Regional Academy Accreditation Program and the Community College Chancellors Office.

THE PURPOSE OF THE ACCREDITATION ASSESSMENTS PROCESS.
The accreditation assessment process includes review and documentation of the status of curriculum, facilities, instructional staff, and instructional support. The guidelines for this accreditation process are that curriculum must be uniform and consistent with the California Fire and Emergency Management Services model. Facilities must meet safety and instructional standards of the State Fire Marshal's Office. Instructional staff must meet the guidelines of the State Board of Fire Services and CFDA. Instructional support must be adequate to maintain the California Fire and Emergency Management Services standards.

Through the Accreditation Assessment, the Select Committee and the CFDA work to achieve and maintain curriculum with high standards of uniformity, consistency and validity. The involvement in Accreditation Assessment is a benefit to the institutions and the Directors. The Directors are able to stay apprised of Fire Service concerns. Daily interaction occurs with Fire Service representatives on a statewide basis. The system consists of the Directors interacting with each other. The interactions also include support organizations, consisting of the Fire Marshal's State Fire Training Staff, the State Board of Fire Services, the Chancellors Office.

THE ROLE OF THE CALIFORNIA FIRE DIRECTORS ASSOCIATION ACCREDITATION.
CFDA agrees to perform or assist in the staff functions for the accreditation assessment process. The CFDA will perform or assist in the staff functions such as site visitations, curriculum and program review, and other duties relating to the accreditation process. It is proposed, to combine the efforts of the State Fire Marshal's Office, and the Community College Chancellors Office with the CFDA proposal.

The Proposed CFDA Accreditation Assessment would involve all fifty-eight colleges in the state offering the new California Fire and Emergency Management Services curriculum. It does not necessarily impact the Regional Academies or Regional Academy Accreditation. Ideally, CFDA would become an adjunct advisory committee to the State Fire Marshal, the State Board of Fire Services and the Community College Chancellors Office. The Advisory position facilitates maintaining the standardization of California Fire and Emergency Management Services training, education, and degree programs.

BUDGETING FOR ACCREDITATION ASSESSMENTS
Participation in the articulation program is an agency or institutional responsibility. Costs for the articulation program, i.e., hours, travel, per diem, meeting time, postage, and printing are borne by the agency or institution making the request.

The increased cost for the CFDA Accreditation Assessment is minimal. For the members of CFDA, the Accreditation Assessment comes by agreement with colleges wishing to participate.

When an agency or institution meets the accreditation criteria, CFDA reports to the Select Committee for review of findings. The Select Committee then makes recommendation that said agency be authorized to deliver recognized California Fire and Emergency Management Services educational courses and degree programs. Recommendations are communicated to the California State Fire Marshal's Office, the State Board of Fire Services and the Community College Chancellor

The utilization of the articulation system will provide rapid, comprehensive assessment and communication of results to the other members of the system. The goals of articulation are achieved and provide benefits to all of the system, students, employers, and institutions.

APPEAL PROCESS
To appeal a decision, an institution may send a letter, stipulating the grounds for such appeal. The letter is sent to the Select Committee and CFDA Board of Directors. The Board will conference and notify the institution, the State Fire Marshal's Office and the Select Committee of their findings.

The Accreditation Assessment adds the dimension of standardizing curriculum being delivered from the college and universities. This is done without interfering with the California State Fire Marshal's Office's accreditation of Regional Academies.

The Select Committee recognizes that an accreditation process must incorporate outside organizations or agencies. Outside organizations review and validate the findings. The Accreditation Assessment plan meets these criteria. The Select Committee is willing to dedicate itself and its resources to the expansion of the role of the State Fire Marshal and the State Board of Fire Services. The expansion includes the accreditation process as outlined in the project.

Responsibility for the accreditation assessment of fire programs in college, university, and participating agencies would become a joint function of the Select Committee, California Fire Technology Directors Association, the Community College Chancellors Office and the California State Fire Marshal's Office.

ACCREDITATION ASSESSMENT PROCEDURES
The self assessment process will assist participants in identifying areas of uniformity, validity and consistency. Once these areas are identified steps can be taken by the institution to correct any deficiencies.

The validation of the self assessment is achieved through an on site accreditation visit by a CFDA accreditation team. CFDA teams consist of three (3) members of CFDA, two of which have been an active participant in an accreditation assessment at their own campus or another institution or agency within the preceding three years. Should the State Fire Marshal be able and chose to participate in the Accreditation Assessment process, the teams would be composed of one (1) representative of the CSFMO and (2) members of CFDA.

PROGRAM SUSPENSION
It is the intent that the Accreditation Assessment be a system to promote standardization through cooperation and training. However to be fair to those who abide by the practices of the system the following is implemented for those who violate practices.

When there is a violation of project standards, the local Fire Advisory Committee, and or CFDA Board of Directors take immediate action to provide assistance to restore standardization. When there is no corrective action and the violations continue, these are the Board procedures; (1) Validate violations. (2) Notify the institution of the violation/s. (3) Describe the action being considered in the notice. (4) Provide assistance as available (5) Set the date for response, allowing reasonable time. (6) Conference with CFDA Board, seek additional information, consider appeal or reach a decision. (7) Set the criteria and time allotment for corrections. (8) Notify the institution, California State Fire Marshal's Office, and the Community College Chancellors Office, And other appropriate fire agencies of the conference findings. (9) Upon request of the institution validate the corrections (10) Notify the institution, California State Fire Marshal's Office, and the Community College Chancellors Office of the restoration of California Fire and Emergency Management Services Accreditation.

PROBATION

For example, if an institution violates the use of the California Fire and Emergency Management Services Standardized Curriculum, the institution may be placed on immediate probation until the end of the semester, trimester, or quarter. Suspension would follow when changes are requested and the offending institution refuses to make them. Suspension occurs when corrections are not made in time for the start of the following semester, trimester or quarter.

An institution may appeal a probation or suspension decision by CFDA.

ACCREDITATION ASSESSMENT GUIDELINES

The Accreditation Assessment is performed by experts, familiar with the field of education and the Fire Service. The oversight functions provide opportunity to review and validate the Accreditation Process by the Select Committee. The members of the Select Committee are associated with the field of education, have fire service backgrounds, and represent various professional organizations.

The following are Accreditation Assessment Guidelines for both self assessments and visitations.

1. Be approved by the State Fire Marshal as a Fire Training Program. Approval requires that there be written agreement of how the college will function with local fire agencies. The agreement provides for regular meetings of a Fire Advisory Committee. The size and representation of committee to be consistent with local conditions.
2. The institution agrees to perform an in house self Accreditation Assessment and to report findings to the California Fire Directors Association Board of Directors.
3. The program utilizes the California Fire and Emergency Management Services curriculum.
4. Instructors are properly credentialed, qualified and regularly evaluated.
5. The College agrees to provide regular training for instructors and academic counselors in the status of fire careers, including updates on policies of the State Fire Marshal and State Board of Fire Services.
6. Texts are validated and consistent with California Fire and Emergency Management Services Curriculum and Policies.
7. Classrooms, laboratories, drill towers, burn rooms, computer labs, library, bookstore, printing facilities, student services, medical, counseling, physical education, and other facilities as required. Specialized facilities and equipment appropriate to courses being delivered.
8. Fire trucks, ladder trucks, protective equipment, computers, fire tools, audio visual equipment, satellite access and other equipment as required. Equipment to be consistent with courses being delivered,
9. There be a single administrator or contact person.
10. File copies of course outlines, lesson plans, syllabus, texts and references.
11. Reports describing courses offered, student numbers, and student evaluations of courses and instructors. These reports should be made at the end of each semester, quarter or class, with annual reports at year end to California Fire Directors Association Board of Directors.
12. Procedures for regular instructor evaluations, and program quality review.
13. Course testing based on minimum standards consistent with California Fire and Emergency Management Services Curriculum and in accordance with the State Fire Marshal's Office and the State Board of Fire Services.
14. Perform test validation procedures. Report any modifications or changes in curriculum that might effect test validation or curriculum.
15. Agree to on site reviews by Accreditation Assessment teams.
16. Print and distribute standardized certificates.
17. Participate in the California Fire Directors Association Curriculum Development Program.

18. Provide credit for courses consistent with collage guidelines, Carnegie Units, articulation requirements, AB 1725, Title V, and CSFM regulations and guidelines.
19. Maintain adequate record keeping.
20. Submit class completion rosters for courses in the certification program.
21. Perform studies and make inquiries to ensure program quality. The intent is to determine how well the program is meeting student and professional needs and standards. Find the percentage of students finding employment. Follow up with employers to determine the adequacy of education.

ACCREDITATION ASSESSMENT REPORTS BY EXCEPTION

Exceptional programs are those that demonstrate outstanding performance and those that fail in the Accreditation Assessment process. Under its own direction the CFDA will make Accreditation Assessment reports to the Select Committee for review. CFDA will provide regular reports of the status of all colleges participating in the project. Details will be provided for exceptional programs to the State Fire Marshal's Office, the California Community College's Chancellors Office, the California Professional Firefighters, California State Firefighters Association, and the California Fire Chiefs Association.

CFDA's efforts in this area provide a valuable service to both the State Fire Marshal's Office and the Community College Chancellors Office. These efforts assist in achieving the goals of the professional associations and unions as well. The objective of this process is to develop an assessment process that ensures the delivery of a high quality standardized curriculum throughout the state.

The intent of the Accreditation Assessments consists of insuring that the curriculums of the California Fire and Emergency Management Services remain standardized state wide. Further, that these curriculums be maintained and updated tri-annually. Participation in the tri-annual curriculum process is part of the agreement with each college. The agreement includes the required participation, of the fire program director or facilitator in the curriculum development and revision process. This requirement ensures that representatives from each of the colleges, universities and agencies offering California Fire and Emergency Management Services programs, participate in the California Fire Directors Association revision process.

STANDARD CURRICULUM

A standard statewide curriculum is essential criteria for any compatible well-developed college program. This is especially true for college programs leading to professional careers. There is no question that education is to become more significant in employment and promotional opportunities of the Fire Service.

Standardization combined with pre-employment education substantially reduces a major cost to employers. Reducing the average on the job training time by 70% or more, provides substantial savings to employers.

There are more reasons related to maximizing the use of training resources. Training that does not adequately prepare students to do the job or function that the course or program purports to do is a shameful waste of resources. Standardization together with Accreditation Assessments can be utilized to increase student contact hours. Uniformity can increase class size and at the same time reduce the total number of courses that are offered. It can also reduce the number of courses that and are canceled because of the lack of students.

Standardization results in students being provided with the same competencies statewide. State wide competencies provide students with the opportunity to qualify and compete evenly for open positions. It is critical for the graduates of all educational programs to have equal access in their quest for employment.

These same competencies provide valuable contributions to city, county, state and private fire agencies. As employers of these graduates, these agencies receive substantial reinforcement for mutual aid, and other types of inter-agency responses through improved operational team work. Standardization provides for increased tactical capability, more effective operations and enhanced efficiency for all types of fire fighting operations.

Standardization requires that course instructional materials, course outlines, and practices be reasonably similar throughout the State. A course may be modified to meet specialized local needs. Specialized needs must exceed the state wide standards. Modified courses must contain 80% of the original course requirements. It also provides for the need to change course content to meet the ever increasing speed of technological change.

At the same time, standardization restrains un-approved major modification of courses or programs. Procedures for maintaining standardization while incorporating changes to courses and programs is a part of this standardization project.

CURRICULUM AND PROGRAM REQUIREMENTS
Members of the profession, candidates, educational administrators, and employers utilizing the educational programs consider the following points in regard to curriculum:

1. Courses must be well defined and have specific course objectives.
2. Courses must be accreditable; articulate toward A.A., and upper division degrees. Courses must meet all legislative requirements as well.
3. Except for manipulative training, course credit must support or be transferable to upper division colleges and universities and avoid becoming terminal at the A.A./A.S. Level. Courses and units that focus on manipulative training do not transfer.
4. The full standardized curriculum is available for delivery, is through the local community college or regional fire academy.
5. Colleges and Universities are to use the standardized curriculum and meet specific academic requirements to provide students with equal access to employment opportunities.[1]
6. Implementation strategies must also be included in the proposed program to assist in statewide implementation and standardization.

This curriculum and program meet these requirements.

CURRICULUM REVISION
Currently colleges are required to revise and update programs and courses every three years. This means that in the California Fire and Emergency Management Services Program there may be seventy (70) or more individual courses.

A program may employ 2 to 3 persons full time. The revision or at least the coordination of curriculum revision usually falls upon the full time employees. Each employee is responsible for the revision of anywhere from 8 to 24 courses per year, depending on the number of employees and the number of courses.

Tri-annual revisions are assigned duties or part of the instructors contract. It is most difficult to be a knowledgeable content expert in every area. It is easy to see one of the reasons state wide standardization of courses and programs is difficult if not impossible under existing conditions and resources.

The curriculum revision plans developed by the California Fire Directors Association are more effective and efficient. The revision plans are based on the concept of dividing the curriculum into manageable portions. The

number of courses in the curriculum stays relatively constant. The Directors propose increasing the size of the revision team from 2 or 3 to 40 or 50. Instead of revising 20 courses a team member would be responsible for revising only 3.

The California Fire Directors Association members represent each of the Community Colleges and Universities that offer Fire Service related courses. Since there are fifty-eight colleges and universities involved there is a pool of fifty or more persons. Working with these fifty people are additional content experts involved in the instruction of these courses. This is a pool of people who work directly with fire related curriculum. In most cases these people are required to participate in the curriculum revision projects. The size of the pool is now approximately 100, compared to as few as 1 or 2 with the existing program. In addition to this pool of experts, there are members of professional organizations. Statewide professional groups provide valuable input, and information. Statewide groups include, the California State Fire Marshal's Office; Chancellor's Office; State Board of Fire Services; State Training Education Advisory Committee; California Fire Chief's Association; League of Cities, Fire Chief's Department; California Fire Chiefs Training Officers Sections, North and South; et al.

There are also county groups that provide important input. Groups such as, County Fire Chiefs Associations; County Training Officers Associations; California Fire Chiefs Fire Prevention Officers Section; California Conference of Arson Investigators; HAZ MAT Technicians; Emergency Medical Response Personnel; EMT's and Paramedic's; et al.

An agreement with the participating colleges would include arrangement for the college to participate in the statewide tri-annual course revision process. The agreement with the college would further provide for participation of the fire instructors responsible for curriculum revision, in the state wide curriculum project.

GUIDELINES ORIENTED JOB ANALYSIS (GOJA)

Course content and the relationship of the education to the job can be validated through the performance of a Guidelines Orientated Job Analysis. The courses in this project are based on limited GOJA's performed on a variety of fire departments. California Fire Directors Association is pursuing the feasibility of a statewide GOJA. If such a study is feasible then the Directors are prepared to seek the necessary funding to achieve this study.

Risk managers also appreciate standardization, as it addresses the issues of job related practice and injury. An educational program based upon a Guidelines Oriented Job Analysis (GOJA) meets this need. The result is, safety considerations are identified and given priority in curriculum to be taught and learned during the training program.

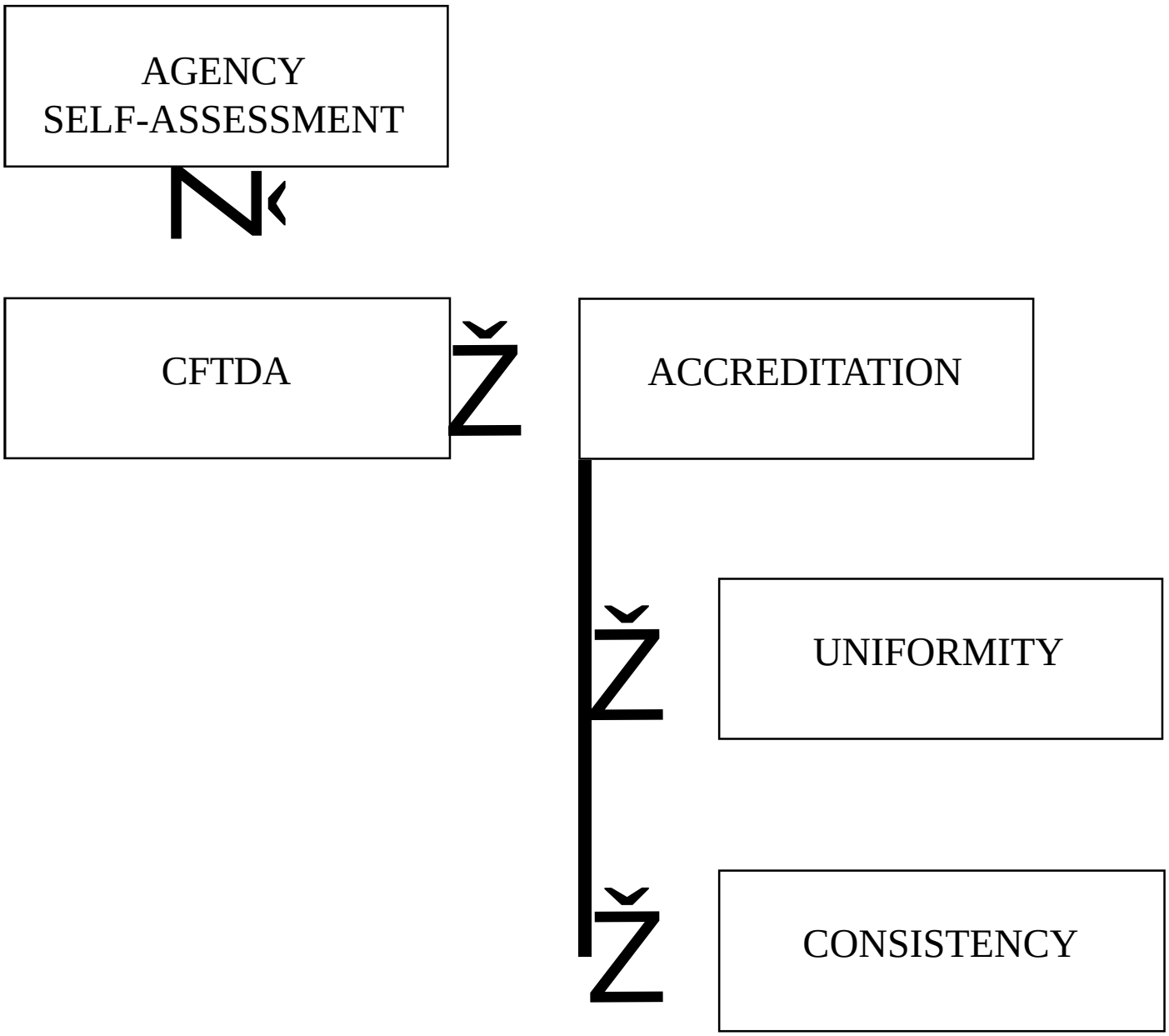
Just as the curriculum takes safety in the use of tools and equipment seriously, the same consideration is given to physical conditioning. National Fire Protection Association Standards pertaining to physical ability standards are also addressed. Physical conditioning, wellness, proper lifting methods, stress management and other aspects of client safety are related to risk management and are prioritized accordingly.

Standardization based upon a GOJA, provides cost saving benefits for students through fewer class cancellations, more consistent emphasis on training requirements though the accreditation process. Substantial cost savings are realized for both candidates and employers though more effective and efficient hiring procedures and reduced training periods for new employees.

[1] **Report on Education and Training for the Fire Service 1963**

Fire & Emergency Management Services

Accreditation Assessment Process



CAL FIRE TECHNOLOGY DIRECTORS ASSOCIATION

CURRICULUM SUPPORT FROM PROFESSIONAL ORGANIZATIONS

CALIFORNIA STATE FIREFIGHTERS ASSOCIATION
CALIFORNIA PROFESSIONAL FIRE FIGHTERS
CALIFORNIA FIRE CHIEFS ASSOCIATION
CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION
OFFICE OF EMERGENCY SERVICES
FIRE DISTRICTS ASSOCIATION
VOLUNTEER FIREFIGHTERS ASSOCIATION
CALIFORNIA CONFERENCE OF ARSON INVESTIGATORS
CALIFORNIA RURAL FIRE ASSOCIATION
LEAGUE OF CALIFORNIA CITIES
METROPOLITAN FIRE CHIEFS ASSOCIATION
STATE ASSOCIATION OF FIRE EDUCATORS
CALIFORNIA STATE FIRE MARSHAL'S OFFICE
CALIFORNIA FIRE INSTRUCTORS WORKSHOP INC.
EARTHQUAKE PREPAREDNESS SOCIETY
ENVIRONMENTAL PROTECTION AGENCY
HEALTH SERVICES
LAW ENFORCEMENT
FEDERAL EMERGENCY MANAGEMENT AGENCY
AND OTHER INTERESTED AGENCIES AND PROFESSIONAL GROUPS

STATE LEVEL

Chapter 6 PROFESSIONAL ORGANIZATIONS

CFTDA will seek support and make reports annually to professional organizations and sub sections where appropriate. California Fire Chiefs Association. California State Firefighters Association, California Professional Firefighters, State Board of Fire Services, State Fire Marshal, California Fire Training Officers Association, California Fire Prevention Officers Association, California Conference of Arson Investigators, and other organizations that may request such reports.

Organizations may request presentations on the standardized project. There is no budget for travel and expense for this type of activity. Presentations' activities depend on the requesting organization to pay for travel and expense.

Once a department receives the annual report from the Directors, it is recommended that the information be incorporated into the departments public information program. Reports and presentations are all part of the marketing process. The marketing plan includes marketing the plan to the public, employers, agencies, and the candidates. The purpose of this marketing effort is to solicit input and support from various groups and organizations. Another function of the marketing effort is to keep Public Safety Curriculum and Professional Development Project in the forefront of these same organizations.

It is essential that participating organizations support standardization of the Fire and Emergency Management Services educational process. Support groups recognize that Employers experience cost reduction, and are able to increase service levels through the employment of professionals. Employers can speed the professionalization of the Fire and Emergency Management Services by supporting these concepts. Employers are encouraged to actively support the hiring of graduates of the pre-employment training programs. It is further suggested that employers incorporate the post employment training system into the promotional process.

CALIFORNIA FIRE TECHNOLOGY DIRECTORS ASSOCIATION
The California Community College Directors Association made the necessary organizational changes to become the CALIFORNIA FIRE TECHNOLOGY DIRECTORS ASSOCIATION. The purpose of this expansion and modification is to expand membership to administrators of all agencies, colleges and universities offering fire service, public safety, fire protection or related education. This expansion will facilitate development of proposed standards in upper division Fire and Emergency Management Services Degree programs in addition to the Community College degrees.

PROFESSIONAL ORGANIZATION LIAISON REPRESENTATIVES
It is important to maintain communications with candidates involved with the education program. Communication should include professionals involved in the occupation, or related professional organizations. The most effective and efficient method of communication is through the agencies and related professional organizations.

Organizations with an interest in the California Standardized Fire Service Degree Project should identify liaisons as representatives to CFTDA. Liaisons may participate as Associate Members of CFTDA. Organizations in both public and private sectors are encouraged to participate. Organizations such as Hazardous Materials groups, architects, engineers, safety groups, et al. Liaisons are non voting representatives to provide guidance and direction.

The purpose of the liaison concept is to promote communication with CFTDA from candidates, professional organizations in both public and private sector organizations. The liaison concept encourages CFTDA to make regular reports to participating organizations.

Candidates have no statewide organization to represent them. Interaction with this population is handled through the institutions providing the education programs. Communications are handled though surveys, newsletters, course and program evaluations.

FIRE AND EMERGENCY MANAGEMENT SERVICES ADVISORY COMMITTEES

The mission of schools is the delivery of quality programs designed to meet student and agency needs. When this mission includes Fire and Emergency Management Services, an Advisory Committee is formed. Ideally, the Fire Advisory Committee is made up of representatives from various fire services related groups. Such groups include agencies, student representatives, professional associations, and unions.

The mission of the local Advisory Committee is to assure adherence to Fire and Emergency Management Services curriculum criteria and standards. Representatives to the Advisory Committee also consider student and employer concerns. Advisory Committees provide professional expertise and guidance for school administrators, program directors and instructors.

Advisory Committee members may be representatives of various groups. Advisory Committee Membership should be made up of balanced numbers of students, Fire Chief's Associations, professional unions, and the California State Association of Firefighters. Membership should also include regional and local associations, such as the Training Officers, Fire Prevention Officers, Arson Investigators, Fire Mechanics related private sector representatives, et al. These liaisons represent organizations whose members have a need for training and/or possess skills and/or knowledge that can guide or improve related training and education.

ADVISORY COMMITTEE MEETINGS

The business of the Advisory Committee should be conducted to address issues, and make recommendations promptly and effectively. Great care must be taken to set a regular meeting time and location. Members must be provided information about school budgets, calendars and schedules well in advance of implementation to provide ample time for consideration and input. People will attend meetings where things happen, and progress is made.

These committees and their meeting must be productive and beneficial. Newsletters or published minutes are highly recommended, with copies to the California State Fire Marshal's Office, the State Board of Fire Services, and the California Fire Technology Directors Association Board of Directors.

It is important that the Fire Advisory Committee membership be balanced. Balanced representation on the committee increases confidence in the process. The process of balancing a committee must address the issue of balance in terms of membership. The number of professions, professionals, and organizations, as well as balance in terms of numbers served.

It is recommended that College or University Fire Advisory Committees serving more than one region or district include at least one member from each of the regions served. Consider the number of professionals served in each region.

In addition to standards and criteria the Fire Advisory Committee functions to advise the local school, College or University about course needs, scheduling, teacher selection, training, teaching standards, facility, equipment and supply requirements. It is wise practice for an institution to submit the names of potential instructors to the Advisory Committee for review before hiring.

The Fire Advisory Committee should meet with representatives from the school. School representatives include, but are not limited to; the administrator in charge of the program, student counseling, admissions and records, facilities, student services and all divisions of the school where fire personnel attend classes that are a part of the Standardized Instructional Program. To maintain the integrity of the Fire Advisory Committee, school representatives participate in discussions but do not vote on issues before the Committee.

Chapter 7 PROGRAM REQUIREMENTS AND GUIDELINES

ENTRY LEVEL "OPEN DOOR" ADMISSIONS POLICY
New students seeking to determine career opportunities should begin the orientation process as soon as possible. Ideally familiarization with the California Fire and Emergency Management Professional Development Program will begin in grammar schools.

Many schools are presently involving 2+2+2+2 or similar programs. The 2 plus 2 types of programs in grammar and high schools to aquatint students with the opportunities for employment in many different career choices. These programs extend the time period for student to study and evaluate a variety of career paths. Ideally, students make a career choice and then select courses and experiences that expedite the achievement of attaining their career goal.

Those that are unable to take advantage of these 2 plus program opportunities, must spend time developing an alternative career selection process. College orientation courses can assist in this effort.

A vital component of professional career procedure is the "Open Door Policy." This concept provides the benefits afforded from the Equal Employment Opportunity Guide Lines. One of the benefits of the open door policy is that it qualifies every person for admission to the training program, without regard to race, creed, or sex.

The Guidelines Oriented Job Analysis identifies physical and intellectual requirements of the occupation. Students receive both vocational and academic counselings. Where training or education can be of assistance, courses are available to assist students in the attainment of these skills and knowledge.

RECRUITMENT
Recruitment should be ongoing regardless of the immediate opportunities for job openings. Recruitment is important to the Open Door Policy. It also attracts candidates that possess the inclination, physical and mental capabilities necessary to achieve success in the occupation of firefighter.

The recruitment program also serves as an excellent public information tool. Since recruitment is informational in nature, it also provides an opportunity to inform the public of the value of the communities fire protection system and how it serves them. It is important that the recruitment program be a part of the public information and public education programs.

The various populations of the community receive recruitment information, schedule presentations on a regular basis, keep records to ensure that recruitment information is presented to the total population of a community.

The recruitment program for the school can be effective immediately as a recruitment tool for the Fire and Emergency Management Services. The long term, ongoing initiation program is the most effective and efficient. The long term program includes presentations in the various levels of the schools and public functions including the 2+2+2+2 types of programs. For example; annual presentations made to every grade in every school. Design these presentations for the various student levels. They can also assist in career studies in the schools and be utilized in teaching life long fire prevention skills and awareness.

Integration of the admissions process into the fire and emergency services entry courses includes an assessment of personal aptitudes, qualifications, and abilities to assist the student in making enlightened choices. The objective of the personal assessment is to assist students in making career decisions. The assessment information provides information for students and counselors in the design of a personalized training and education program. Prioritize

the personalized training program to discover learning assets, disabilities, abilities, physical capabilities, and a medical status.

Students receive assistance in formulating their own personal career plan. The personalized career plan includes goals, time lines, and a record keeping system. Utilize components of the career plan to formulate a resume building and job search program. Utilize the institution's retention and tracking plan, and formulate a plan if one does not exist.

The goal of the admissions process is to provide opportunity for candidates to become familiar with the Fire and Emergency Management Services. Working conditions, pay, employment, and career opportunities, are evaluated to assist the candidate in forming a personalized decision and career plan.

MAXIMIZING PROGRAM RESOURCES

An "Open Door Policy" does not mean unrestricted or unlimited numbers of classes. When there is a list of graduates and there are no job openings, generating unlimited numbers of additional qualified students is not productive. School administrators are responsible to know the job market and should be able to forecast the number of students that will find jobs with local employers within the next year.

The number of job openings should be in relation to the number of course offerings. In some regions or colleges there may be insufficient numbers of students that may result in classes being canceled or postponed. Course reductions can cause hardships on students, staff and program managers. To offset this potential problem, staff and program managers should be active in surveying the job market for the pre-employment students and the training needs of the in-service population. There should also be an awareness of possibilities for graduates to find employment in related occupations.

It is important for instructors to receive sufficient release time to conduct activities related to surveying employment opportunities and job needs. Program managers should be working with surrounding regions and colleges to determine the feasibility of conducting joint academies, optional scheduling, or other alternatives to reach a balance of students and job openings. This will enable the program to be ongoing while maximizing available resources.

EQUAL EMPLOYMENT OPPORTUNITY GUIDELINES

Equal Employment Opportunity Guidelines provide requirements for a candidate selection and training process. Education programs should be based on job related requirements, and validate job requirements through a Guidelines Oriented Job Analysis or other approved process.

OPEN DOOR CONCEPT AND UPPER LEVEL ENTRY

Another component of the EEOC Guidelines is the "Open Door Concept. This provides the opportunity for anyone to enter the training program at the entry level. Those that are rejected during the training and education program are rejected on the basis of job related and validated requirements. The ''Open Door Concept" supports and encourages the validation of all types of training**.**

Education programs address the needs of the experienced fire fighter, students coming from out of state, or partially trained candidates seeking employment. Candidates possessing the necessary knowledge, skills and capability represent a cost saving asset to employers and the community. Upper level entry candidates are an important concern to the college.

UPPER LEVEL ENTRY AND THE CHALLENGE PROCESS
To facilitate upper level entry, candidates having received training from other sources or experience may gain credit through a variety of different methods. Advertise and promote the process of granting credit for alternative training. Transcript evaluation, Assessment of Prior Learning Programs, Assessment Centers, the Challenge Process and other methods serve to provide credit for training gained through alternative learning programs. Validation methods need to be acceptable to both the institution and the profession.

CREDIT BY EXAMINATION OR CHALLENGE PROCESS
There are many reasons for the challenge process. Most of these reasons relate to candidates who have acquired skills and knowledge in some traditional or non-traditional method. Regardless of how the skill or knowledge was learned, challenge candidates are given an opportunity to demonstrate proficiency.

The training and education recognition concepts to be incorporated in this project will provide opportunity for firefighters to achieve recognition for past training accomplishments including non-traditional educational achievements.

A major flaw in existing programs is the failure of one program or agency to recognize training programs of another agency or program. Different types of training offered in public and private institutions such as "non-transferable education" and other seemingly not so helpful routes caused this flaw.

Much of the non-recognized or non-traditional programs were created by utilizing traditional curriculums into the non-traditional program format. These types of courses were taken by many fire professionals at a time when there were no firefighter schedules, AA/AS degree, or transfer programs available. When degree programs were developed, many of the non-traditional types of courses would not be accepted as meeting degree requirements.

The effect is to make the attainment of degrees and advanced professional status seem difficult or impossible. The removal of such barriers is paramount to the advancement of a standardized curriculum and professional growth.

THE CHALLENGE PROCESS, AND ASSESSMENT OF PRIOR LEARNING
There are methods of overcoming the obstacles of non-traditional or not transferable course units. Methods include the Challenge Processes, Assessment of Prior Learning (APL), and petitions to translate learning acquired through non-traditional learning and certain life experiences into transferable college credit. These processes may be used jointly in performing assessments.

These are useful tools in reducing the cost of training and education by and to minimize the commitment of time by students. Students to avoid unnecessary repetition of courses and relearning what they already know. This process can also require additional training where it is justified. Properly administered, this recognition process can achieve legitimate recognition for all types of training and education in meeting state wide professional standards.

Application for credit by examination, Assessment of Prior Learning or other acceptable procedure will be made by the student in accordance with local college procedures. The process is to complete the procedure and forward the results to the Fire Advisory Committee.

CHALLENGE PROCEDURES
The requirements for the Challenge Process are the procedures set forth by the local college or university. The challenge for fire courses shall meet the minimum requirements of the college or university and be not less than the following:

(1) For a lecture type class, a passing grade on the mid-term and final examinations, completion of the required projects, with a passing grade is required.
(2) For courses using both lecture and lab, a passing grade on the mid-term, and final examinations, completion of the required projects, and a skill's demonstration of the lab work with a passing grade is required.
(3) For a lab type of class, a passing grade in the performance a skill's demonstration with a passing grade is required.

The skill's demonstration minimum standard is for the candidate to complete the evolution, utilizing all safety procedures, without damage to apparatus or equipment, or the endangerment of other personnel. Do not consider the methods used during a skill's demonstration. Methods vary in different agencies. Therefor, in assessment situations when there has been no training by the institution, all methods are acceptable when performed according to safety standards.

Should an appeal be necessary, the student will be responsible to formulate a written justification for the appeal to the local Advisory Committee and follow local college appeal procedures. The decision of the local college is final.

The local college is responsible to send the justification and supporting documents to the California Community College Fire Directors Association Board of Directors for review and consideration of curriculum changes.

TRANSCRIPT EVALUATION

Transcript evaluation involves comparing a candidate's transcript and course descriptions from other training agencies with the Standard California Fire and Emergency Management Services Curriculum. Perform transcript evaluations in accordance with college or university procedures. The College Fire Training Staff or a sub group of the Fire Advisory Committee performs transcript evaluations. In either case findings, are a recommendation to the institution to provide full credit, partial credit or no credit.

BACKGROUND CHECKS

Required background checks are to meet EEOC guidelines as well as other related legislation. Students entering a public service career should be aware of these possible requirements.

Encourage students to have a history that demonstrates the value of good conduct. It is imperative that students be informed, as early as possible, of the adverse effects of drugs, and crime on their lives and careers.

Students should practice physical fitness and maintain a record of these activities. Just as a long record of crime illustrates negative character flaws, a long record of good conduct, maintaining physical fitness, and public service, illustrates positive attributes of determination, self-discipline, and attitude. A good financial record indicates responsibility. Students should be aware of background checks and be prepared to use the opportunity to show their own positive qualifications. Background checks are the responsibility of the departments or agencies requiring them and not the school. However, when the school offers a career program it is responsible to advise students of all requirements and considerations.

ORIENTATION AND COUNSELING

One intention of the orientation and counseling through the first semester is to make candidates aware of all of the job requirements, opportunities, and options. Keep candidates apprised of their own progress in meeting standards and career goals as they proceed through the training program. When a candidate fails to meet these standards specific things occur.

PERFORMANCE STANDARDS
Failure to meet job related standards of performance, safety or violation of the code of conduct are the only reasons for disqualifying a candidate. In cases of safety or violations of the code of conduct, depending on the severity of the violation, dismissal may be immediate. Other infractions require distinct procedures. Warnings of deficient performance must be specific in identifying sub-standard performance, include a description of the change that must occur and a deadline for the correction. By signing the notice of sub-standard performance the candidate acknowledges that he/she understands the warning and the description of acceptable performance.

Note all admonishments in student records. Make comments by exception. Performance above or below the standard requires comment. Candidates failing to meet program standards are first cautioned orally about performance requirements. Give written second and third warnings. Have candidate sign all written warnings. On the third warning, action is to be taken. The following are four possible action alternatives:

1. Reconsideration of the students' career decision, requiring academic review with both academic and vocational counselings to provide alternative recommendations.
2. Identification of remedial training or preparation that would assist the candidate.
3. Identify transfer options to related career opportunities and programs that may better suit the candidate.
4. Dismissal from the program. Whenever possible the decision to dismiss or suspend a candidate, the decision should be a joint decision between staff and candidate.

GENERAL EDUCATION
Students entering the Standardized Professional Development Program must complete the transfer level, general education program. Pass a college entrance exam with a minimum of tenth grade math and twelfth grade reading. Pass a National Fire Protection Association pamphlet 1785 medical evaluation, and the physical ability demonstration prior to entering the Fire and Emergency Management Services Basic Academy. Surveys of materials and practices used in the work place and training texts identify tenth grade math and twelfth grade reading as minimum requirements. Job related requirements are not artificial barriers to entrance.

Traditionally the Fire and Emergency Management Services have not required that general education be completed before entering the courses for the major. It is imperative that this requirement be implemented with the Standardized Degree Program. During the implementation of the California Fire and Emergency Management Services program, students currently enrolled in the major will be exempt from this requirement as follows. The student must remain consistently enrolled in the program with good attendance without missing more than one consecutive semester.

Completion of the General Education requirements promotes improved reading, writing, and learning skills. These skills maximize the utilization of knowledge learned in the major and permit the major classes to taught at the proper level. Utilize these skills in term projects, and research activities. This is a most important asset to the student by preventing the syndrome of being programmed for failure.

The attainment of professional status is accepting the responsibility requiring individual contribution toward the growth of the profession. Much of the growth will come from research activities, conducted during the education and training program.

MEDICAL ASSESSMENTS
All students wishing to pursue a career in the Fire and Emergency Management Services must complete an assessment performed by a Licensed California Medical Physician. The assessment must meet the minimum requirements of the NFPA 1785 Professional Standard.

PHYSICAL ABILITIES
Require all students entering the degree program or classes related to the goal of becoming a firefighter to pass the physical ability demonstration described in NFPA Standard 1785.

PREREQUISITES
Standardization of prerequisites within the major will become a requirement within three (3) years, following the adoption of the Standardized Degree Program. All prerequisites should be content validated to courses requiring them. Validate all courses to the career. Practice all skills and utilize knowledge required of candidates during instruction. Class room courses confined to lecture may be a required prerequisite to entering an academy where related skills are practiced. Include the content of prerequisite courses in the teaching or practice of skills in the academy. Prerequisites must meet California College and University Standards.

COURSE SCHEDULE

(The following is a recommended class schedule.)

First semester:

001 CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 001
Fitness Assessment & Career Evaluation

101 CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 101
Fire Protection Organization

102 CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 102
Fire Behavior & Combustion

103 CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 103
Fire Protection Equipment & Systems

Second semester

104 CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 104
Building Construction for Fire Protection

105 CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 105
Fundamentals of Fire Prevention

Third Semester

002 CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 002
Fitness Assessment & Career Evaluation Practice

106 CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 106
Physical Fitness for Public Safety Personnel

107 CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 107
Fundamentals of Personal Fire Safety

Fourth Semester

007 CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 007
Physical Fitness Agility

008 CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 008
Orientation and Physical Fitness *****

100 FIRE AND EMERGENCY MANAGEMENT SERVICES 100
Emergency Medical Technician Training

060 FIRE AND EMERGENCY MANAGEMENT SERVICES 060
Basic Academy *****

* Maximize the retention of skills through intensive course schedules. Teach the third semester classes, 008, 100, and 060 on an intensive schedule. An intensive schedule is eight or more hours of instruction per day. Follow the instruction period with an orderly program of securing equipment and clean-up. Clean up includes apparatus, equipment and facilities.

Student records and transcripts should reflect the following units after successful completion of these courses:

001 CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 001
Fitness Assessment & Career Evaluation **0.5 units non-transferable credit**

002 CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 002
Fitness Assessment & Career Evaluation **0.5 units non-transferable credit**

101 CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 101
Fire Protection Organization 3 **units transferable credit**

102 CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 102
Fire Behavior & Combustion **3 units transferable credit**

103 CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 103
Fire Protection Equipment & Systems **3 units transferable credit**

104 CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 104
Building Construction for Fire Protection **3 units transferable credit**

105 CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 105
Fundamentals of Fire Prevention **3 units transferable credit**

106 CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 106
Physical Fitness for Public Safety Personnel **5 units transferable credit**

107 CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 107
Fundamentals of Personal Fire Safety **3 units transferable credit**

007 CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 007
Fire Fighter I Physical Agility **0.1 units non- transferable credit**

008 CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 108
Orientation and Physical Fitness **1 unit non-transferable credit**

100 FIRE AND EMERGENCY MANAGEMENT SERVICES 100
Emergency Medical Technician Training **6 units transferable credit**

060 FIRE AND EMERGENCY MANAGEMENT SERVICES 060
Basic Academy **8 units of non-transferable credit**

ACADEMY ENTRY REQUIREMENTS

Before entering the Academy students receive academic and vocational counseling. Provide counseling by both members of the institutions counseling staff and members of the California Fire and Emergency Management Services staff. The objective of counseling is to insure that students are satisfied they have made a correct career choice, are adequately prepared for the rigors of the Academy having met the prerequisite requirements, and are willing to function adequately in the California Fire and Emergency Management Services.

ALTERNATIVE FIRE ACADEMY SELECTION PROCEDURES

Develop an academy roster after students complete the prerequisite program and counseling evaluations. Identify all qualified students and fill the academy roster.

Use the following procedure when there are more candidates than open seats in the Academy. Select names of eligible candidates by random selection. Names' one through thirty-five go to the next available academy. Names' thirty-six through 71 to the second available academy, and so on until the entire list has been assigned to an academy. Exhaust the list and create a new list using the same technique. Give students the right of refusal and permit them to wait until the next academy if they wish. If the student has not elected to attend the academy before the list expires, the student must repeat the selection process. Do not carry names on one list to another list.

Upon completion of the entry level training program, candidates are Firefighter I Trained. Place the names on an eligibility list of qualified entry level candidates. Market this list to potential employers.

OPTIONAL HIRING PROCEDURE

The colleges and employers working together in assisting students in the transition from being students to being employees can make the education program substantially more effective and efficient. The college does not want to become the hiring agent for the employer, nor does the employer want to give up these rights. However, recognize that there can be a good working relationship between the colleges and employers that are good for the student, college and the employer.

When local agencies and others who would hire the graduates of the Fire and Emergency Management Program are active in the program consider the following procedure: Random Selection of Candidates by Computer. This procedure is fair, highly impersonal, cost effective, and promotes coordination between employer and the college. In return for massive cost savings, employers are usually willing to implement procedures to ensure fairness and equity to all candidates. Marketing the benefits is key to the project's success.

When employment openings occur, select candidates using random selection by computer. From the list of "Qualified Entry Level Candidates" use a computer to randomly select a smaller list of candidates for interview by the hiring agency. It is economical for the hiring agency to contract with the institution for the generation of interview lists. Where there are large eligibility lists, utilize safeguards that insure equal opportunity for hire for all candidates.

This alternative selection process saves a substantial amount of money and time. The process is dependent upon confidence in the program and **a strong probation program.** Nullify the impact of test fright. Another positive aspect is the involvement of employees of the hiring agency becoming involved in the hiring of new employees. This practice provides a sense of involvement and responsibility. Permanent employment of the new candidate is dependent on all aspects of performing on the job.

SKILLS MAINTENANCE

Following the completion of the Academy, students searching for employment are encouraged to enroll in a skill's maintenance program. Manipulative skills deteriorate rapidly when not regularly performed. The Skills maintenance program is designed to sharpen and maintain knowledge and skills learned in the Academy. Some of these skills are team operations, others require special equipment, apparatus, or facilities. This class provides students an opportunity to train with a group, using proper equipment, apparatus, and facilities. Supervision is provided to insure performances utilize correct procedures and safety. Give special emphasis to a review of career planning, resume building, and job hunting skills.

The Skills Maintenance Program should also include a tracking system. Maintain a current count of graduates, those who have found jobs and those who are job hunting. Communications with graduates to follow up on problems encountered relating to being hired, training and education are very important.

THE PROBATION PERIOD

The interest of the college in the probation period focuses on the adequacy of the education. It is to ascertain the quality of the education program. At the end of the training program place, candidates find employment in the probationary mode. The Professional Development Project accepts the probation period as and extension of the education period.

This creates a stronger link between the instruction and employment probationary periods. This link is vital to maintaining ongoing program improvement. During the training program, candidates formulate personal achievement goals based upon the training program goals and objectives. Probationary candidates become proactive rather than reactive in the demonstration of learned skills, and abilities acquired during the instructional period.

An effective comparison between candidate performance and employment standards occurs during the probation period. This is the time period when a candidate, trained to a new level, has an opportunity to perform and demonstrate proficiency in the standards of the new level. This is also a demonstration of program effectiveness.

The probation period is an opportune time to assess the quality of an education program. The job performance of graduates of the program can identify teaching strengths and weakness, evaluate the adequacy of the learning environment, curriculum and program quality. Advisory committees review all probationary failures to determine when curriculum modifications are in order.

The jurisdiction of the probationary period belongs to the employer. For student well being and program improvement communications should be ongoing between the training agency and the employer. These communications must meet legal restrictions and address course content, conditions, procedures and not individuals nor individual records.

Follow and monitor probationary procedures providing candidates with regular progress reports that reflect the program effectiveness. Employers usually certify new employees to a new rank at the successful completion of the probation period. Employers use care not to certify candidates that fail to meet the required standards. Professionalism requires rejection of non-certifiable candidates. Consistency is important to the morale and sprit of those in the training program.

Even though rejection may occur there are several options. Some of these options provide the educational institution and opportunity to be of assistance. An employer may chose to extend the Probation period when warranted. Other options open to management are to schedule special retraining, demotion, or separation.

The college is not directly involved in the probation process, the college interest is to provide additional training when necessary, and to make warranted changes in curriculum. Professionalism requires careful review and application of professional standards. The most important consideration is to maintain the professional standards with fairness and equality. Employers make decisions within the guidelines of the probationary level of the profession. Those incapable or unwilling to make and/or abide by decisions that maintain the integrity of the profession are unworthy candidates for the profession.

Conduct evaluation of tests, texts, instructional methods, instruction, curriculum, instructors and facilities at the end of each training and probationary period. Use the feed back from evaluations and the probation period to identify the need for change and revision of the training program.

INSTRUCTOR RECRUITMENT

Only the best of the best should become teachers. Spend adequate time and resources in developing a strong cadre of instructors. It is imperative that instructors be adequately paid for their responsibilities and work. Require that instructors meet the NFPA 1041 Professional Standard at the appropriate level and meet the California State Board of Fire Services requirements. Instructors must meet the certification for this standard and if possible possess degrees or advanced degrees consistent with the level of instruction being taught.

In addition to the NFPA Standard 1041 and degree requirements', instructors should have practiced the profession for at least seven years and be proficient in the subject matter being taught. Persons with special expertise or other special qualifications may not have credentials to teach. This type of person may be employed as an instructional associate or instructional assistant. Instructional Associates/Assistants teach under the supervision of a credentialed teacher.

FIRE INSTRUCTOR AND FIRE COUNSELOR ORIENTATION

Require instructors to attend an orientation course for credit at least once per year. To be updated on legislation, program and course modifications, career opportunities and other general responsibilities that may apply.

CERTIFICATES, CERTIFICATION AND DEGREES

Certificates, certification and degrees are all methods of recognizing training and education. One of the goals of the state wide standardization project is to incorporate professional standards, certificate and certification programs into the degree programs. It is just as important that the Professional Development program support the certification program. Degree programs must work jointly with the California Fire Service Certification Program. It must be easy for a employer for example to look at a degree or certificate and know exactly what education or training took place, and the extent of the training in terms of hours and units.

It is important that the certificate reflect accurately the accomplishment it represents. For example when a course for a certification requirement goes beyond the minimum statewide certification requirements, the specific modules and hours above the minimum are to be reflected on the back of the certificate. When hours are added to an existing topic or special modules are added to meet local requirements, the extra hours and or special topics are to be listed on the back of the certificate. . For example, in the Basic Academy, the minimum statewide requirement is 240 hours. When a module of training is added, the topic, the number of hours, and the units of credit are listed on the back of the certificate. Each hour above the minimum requirement must be accounted for in this same manner. For a Basic Academy of 436 hours; 436 (hours in the academy) minus 240 (minimum standard hours) = 196, 196 hours must be accounted for on the back of the certificate.

COURSE CREDIT

Manipulative skills' training earns non-transferable units. California Fire and Emergency Management Services Professional Development Program is designed to be transfer level education. Advanced courses that may contain both theoretical and manipulative skills may earn a combination of transfer and nontransferable credits. California Fire and Emergency Management Services Professional Development Program core course requirements remain consistent with the requirements of the California State University System Transfer Requirements.

Minimum requirements for credit are a passing grade or better on the mid-term and final examinations, satisfactory completion of all required projects of an equivalent traditional course.

Chapter 8 BASIC AA OR AS DEGREE AND CERTIFICATES

The purpose of the Public Safety Curriculum and Professional Development Project is to create a standardized curriculum for the development of a career education program for fire professionals. The California Fire Service, the California State Fire Marshal's Office, and the California State Fire Training Program have established the foundation and the need for such a program through the State Certification Program.

The California Fire Technology Directors have a long history of contributing to this system. The Public Safety Curriculum and Professional Development Project brought about reorganization of the California Fire Technology Directors Association to be the new California Community College Directors Association.

Through this change the directors of the university programs were added to the membership. The California Fire Technology Directors Association added new resources to the system and worked to produce the California Fire and Emergency Management Services Professional Development Project.

The Project provides the transition of the Fire Science and Fire Technology programs. The transition is from vocational certificate or degree programs to an articulated professional development program leading to advanced degrees. Advanced degrees establish an important component of the criteria for professional recognition.

EMERGENCY MANAGEMENT SERVICES SPECIALIST CERTIFICATES AND DEGREES

There is a need to provide an education program for persons seeking careers in the Fire Service that do not require the same skills and knowledge as that of a fire fighter. At the same time it is important that potential employers be able to discern firefighter certificates or degrees from certificates or degree designed for positions not requiring firefighting skills.

Development of adjunct career paths will meet the needs of candidates specializing in a particular area of the Fire Service Profession. These candidates seek employment in either public or private sector positions. Adjunct career paths meet the needs of employers having positions identified by choice or the GOJA process that do not require the knowledge and/or skills of the Fire Fighter.

Specialist candidates earn degrees or certificates that do not contain the term "Fire Service." Specialist certificates are Emergency Services Specialist career paths. The purpose of this distinction to clearly identify candidates seeking careers in non-fire fighting positions. Candidates can convert Emergency Services Specialist Certificates to "Fire and Emergency Management Services" degrees upon completion of the requirements.

When there is a perceived need for Specialist candidates other than those related to firefighter, a school may request assistance from the California Fire Technology Directors Association. The other directors are polled to determine if there may be a state wide need for such curriculum. CFTDA will work with the school or schools to develop an alternative pilot certificate or degree program.

LEVEL TWO ADVANCED AA/AS DEGREES

Through the Advanced training and education programs, graduates of the Entry Level Program are able to extend this knowledge to the next level. Advanced Degrees at the community colleges prepare candidates for job performance up through the first level supervision positions. Delegate the second level and above technology, management and administration to the universities. These programs meet the needs of those employed either as supervisors or managers in the Fire fields.

Level one Advanced Fire Services AA/AS degrees exist and meet the requirements of National Fire Protection Association Standards. This project prepares the way to articulate these programs with the Level two programs at the universities, and Assure articulation when the Level One programs meet transfer requirements.

ADVANCED DEGREES AND HIGHER LEARNING

It is essential that the Fire Services Advanced Degrees, and the upper division professional growth program be a part of future Professional Development projects. Using existing Guidelines Oriented Job Analysis, (GOJA), it is possible to determine the kind of education required to meet the needs of fire protection agencies. Require job related skills and knowledge for employment and not the degrees. Present the job related skills and knowledge in a form that also meets degree requirements. It is advisable to conduct a statewide GOJA process during the second or third phase of the Public Safety Curriculum and Professional Development Project to verify and update this vital information.

The GOJA process will identify the level at which the program can merge with other programs such as Business Administration, Public Administration, Architecture and Engineering.

The purpose of the Standardized Degree program is to achieve recognition of the professionalism that exits in the Fire and Emergency Management Services. Standardizing training and education in all the ranks and adjunct positions in the Fire and Emergency Management Services provides the platform necessary for such recognition. Incorporating the accreditation process facilitates the link with the upper division programs by identifying the advanced study required for professional status.

FIRE AND EMERGENCY MANAGEMENT SERVICES DEGREE OPTIONS

Once the California Fire and Emergency Management Services Standardized Entry Level Program is in place, work will start on the specifics of the advanced aspects of the program. Development of advanced educational programs include AA/AS Degree Options, related to professional standards of the Fire Officer, Fire Prevention Officer, Emergency Medical Services Officer, et al. The Select Committee and California Fire Technology Directors Association have agreed to do this work as a part of normal duty assignments.

FUTURE CHANGES IN THE DELIVERY SYSTEM

The work on this project lays the foundation for the development of the advanced courses and degrees. This work strives to meet the needs of the future. The system will utilize integrated, interactive computer programs, down link television facilities, and the capabilities of the world wide web as a part of the delivery system.

All of these elements are in the development of future projects. These and other changes could radically change the educational system as we know it. In order to meet its obligations, the Fire Service must be proactive in these developments.

A JOINT EFFORT IN FIRE PROTECTION DEVELOPMENT

Under the auspices of Public Safety Curriculum and Professional Development Statewide Steering Committee, the Select Committee will work with California Fire Technology Directors Association. This joint effort will continue the work on the development and integration of professional standards. The plan is to develop lower and upper division programs in association with the California State Fire Marshal's Office.

A JOINT EFFORT IN PUBLIC SAFETY PROFESSIONAL DEVELOPMENT

Still another aspect will be the development of curriculum common to the Public Safety Options. This work is in association with the Public Safety Curriculum and Professional Development Statewide Steering Committee and the Select Committees from the other public safety professions.

Analysis of job descriptions' and existing curriculum by the Public Safety Curriculum and Professional Development Statewide Steering Committee is being used to identify jobs that utilize similar skills and knowledge. For example, examining the job descriptions of Law Enforcement, Corrections, Fire, and Haz Mats

for positions that may be similar in nature. Develop a curriculum meeting the needs of students from the four public service areas for joint presentation. This material to be presented in a common course and meets the needs of all four professions.

A specific example is courses in arson investigation. Required arson skills are the same for both Police and Fire professionals. This is especially true in the field of management and administration. Professional supervision concepts are similar in most of these career areas.

Courses and programs that meet the joint needs of several professions are both cost effective and efficient. Combining Public Safety Students would improve communications and cooperation between these professions.

Combining two or more courses into one provides a larger pool of candidates from which to draw advanced students. This translates into fewer classes being canceled. A larger pool of graduates at the AA/AS level creates greater opportunities at the upper division levels.

A PROACTIVE MISSION

The process of developing, changing and updating curriculum never ends. Program development and redevelopment must be on-going, and both proactive and reactive in its mission.

CHAPTER 9
PROGRAM OUTLINES
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES
ENTRY LEVEL FIREFIGHTER DEGREE (1001)

PROGRAM PROPOSAL: NEW _____ REVISION _____ DELETION _____

DIVISION DEAN SIGNATURE _____ DATE _____

ADVISORY COMMITTEE APPROVAL
DIVISION CURR COMMITTEE DATE _____ CURRICULUM COUNCIL APPROVAL DATE _____

TEXT (underline changes if a revision)
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES,
FIREFIGHTER DEGREE (1001)
The public fire service program is based upon National Fire Protection Standards, California State Board of Fire Services Policies, and local agency requirements. Designed to provide occupational preparation in federal, state, local and private fire protection agencies and for those desiring to enter fire service work in such areas as firefighting with emphasis in fire prevention, inspection and safety practices. Completion of the Academy 060 course is recognized by the California State Board of Fire Services as meeting the requirements of Certified Firefighter I. Credits earned learning manipulative skills are nontransferable. Prerequisites to the Basic Academy include: Completion of university transfer level general education; must meet NFPA 1582 Medical Standards, pass physical ability demonstration and illustrate specific reading, writing and mathematics skills.

Major requirements for the associate in science or arts degree:
Table—

PROGRAM OUTLINE
Page 1 of 2
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES,
ENTRY LEVEL FIREFIGHTER DEGREE (1001)

PROGRAM PROPOSAL: NEW _____; REVISION_____; DELETION_____

DIVISION DEAN SIGNATURE_____; DATE _____

ADVISORY COMMITTEE APPROVAL
DIVISION CURR COMMITTEE DATE _____ CURRICULUM COUNCIL APPROVAL DATE _____

TEXT (underline **changes if a** revision)
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES, FIREFIGHTER DEGREE (1001)
The public fire service program is based upon National Fire Protection Standards, **California State Board** of Fire Services Policies, and local agency requirements. Designed to provide occupational preparation in federal, state, local and private fire protection **agencies and for those desiring** to enter fire service work in such areas as firefighting with emphasis in fire prevention, inspection and safety practices. Completion of the Academy 060 course is recognized by the California State Board of Fire Services as meeting the requirements of Certified Firefighter I. Credits earned learning manipulative skills are nontransferable. Prerequisites to the Basic Academy include: Completion of university transfer level general education; must meet NFPA 1582 Medical Standards, pass physical ability demonstration and illustrate specific reading, writing and mathematics skills.

Major requirements for the associate in science or arts degree:
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES: FIREFIGHTER DEGREE (1001)

MAJOR	**NO.**	**COURSE**	**UNITS**
REQUIRED COURSES:			
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	101	Fire Protection Organization	3.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	102	Fire Behavior & Combustion	3.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	103	Fire Protection Equipment & Systems	3.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	104	Building Construction for Fire Protection	3.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	105	Fire Prevention	3.0
Total Core Units			15.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	001	Fitness & Career Progress Assessment I	.5
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	007	Firefighter I Physical Ability Demonstration	0.1
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	008	Basic Fire Academy and Physical Fitness Orientation.	1.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	060	Basic Fire Academy	8.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	100	Emergency Medical Technician Training	6.0

FUTURE GOALS:

CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	002	Fitness & Career Progress Assessment II	.5
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	106	Physical Fitness for Public Safety Personnel	5.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	107	Personal Fire Safety	3.0
ACADEMY UNITS			23.1
TOTAL CORE AND ACADEMY UNITS:			38.1

RECOMMENDED ELECTIVES: (ELECTIVES ARE SELECTED BASED UPON ASSESSMENT OF CAREER AND EDUCATION PREPARATION IN BASIC SKILLS, LANGUAGE, SCIENCE AND ENGINEERING.)

MAJOR	NO.	COURSE	UNITS
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	121	Fire Apparatus and equipment	3.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	122	Fire Hydraulics	3.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	123	Fire Investigation	3.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	124	Fire Related Codes and Ordinances	3.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	125	Firefighting Tactics and Strategy	3.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	126	Fire Company Organization and Management	3.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	127	Public Safety Records and Reports	3.0

Transferable courses form the California Fire Academy require Program Director or Discipline Coordinator and program counselor approval.

All course work must meet or exceed the California Fire and Emergency Management Services Standardized Curriculum as developed by the California Fire Technology Directors Association, the policies and requirements of the California State fire Marshal’s Office, the State Board of Fire Services and approved by the California Community College Chancellor’s Office.

Revised

Program Outlines

EMERGENCY MANAGEMENT SERVICES ,
EMERGENCY MANAGEMENT SERVICES SPECIALIST DEGREE (1002)

PROGRAM PROPOSAL: NEW _____ REVISION _____ DELETION _____

DIVISION DEAN SIGNATURE _____ DATE _____

ADVISORY COMMITTEE APPROVAL
DIVISION CURR COMMITTEE DATE _____ CURRICULUM COUNCIL APPROVAL DATE _____

TEXT (underline changes if a revision)
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES,
EMERGENCY MANAGEMENT SERVICES SPECIALIST (1002)
The public fire service program is based upon National Fire Protection , California State Board of Fire Services, and local agency standards. Designed to provide occupational preparation for employment in federal, state, local and private fire protection agencies and for those desiring to enter fire service work in such areas with emphasis in fire prevention, inspection and safety practices. Prerequisites to the area of specialty: Completion of university transfer level general education; illustrate specific reading, writing and mathematics skills.

All course work must meet or exceed the California Fire and Emergency Management Services Standardized Curriculum as developed by the California Fire Directors Association; the policies and requirements of the California State Fire Marshal's Office, the State Board of Fire Services, and approved by the California Community College Chancellors Office.

Major requirements for the associate in science or arts degree:
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES:
EMERGENCY MANAGEMENT SERVICES SPECIALIST (1002)

MAJOR	**NO.**	**COURSE**	**UNITS**
CORE UNITS:			
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	101	Fire Protection Organization	3.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	102	Fire Behavior & Combustion	3.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	103	Fire Protection Equipment & Systems	3.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	104	Building Construction for Fire Protection	3.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	105	Fire Prevention	3.0
Total Core Units			15.0

EMERGENCY MANAGEMENT SERVICES,
EMERGENCY MANAGEMENT SERVICES SPECIALIST DEGREE (1002)

Major Requirements **U**

The degree, Emergency Management Services Specialist requires a passing grade of C or better in a combination of courses totaling twelve (12) units in an approved area of specialization. Courses are identified and agreed to with the Program Director or Discipline coordinator and the program counselor. Once the course of study is agreed upon it may not be changed without written authorization of the Program Director or Discipline coordinator. Courses may be selected from transfer level courses from the Fire Discipline or other majors within the college catalog. Courses from other majors require written approval of the Program Director or Discipline coordinator from both disciplines.

Courses are selected based upon assessment of student benefit and class availability. Student benefit includes advanced career and education preparation in basic skills, language, science and engineering with emphasis given to career growth.

TOTAL UNITS:

Recommended Electives: (Electives are selected based upon class availability and assessment of student benefit. Stud benefit includes advanced career and education preparation in basic skills, language, science and engineering.)

MAJOR	NO.	COURSE	UNITS
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	001	Fitness & Career Progress Assessment I	.5
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	002	Fitness & Career Progress Assessment II	.5
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	007	Firefighter I Physical Ability Demonstration	0.1
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	008	Basic Fire Academy and Physical Fitness Orientation.	1.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	060	Basic Fire Academy	8.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	100	Emergency Medical Technician Training	6.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	106	Physical Fitness for Public Safety Personnel	5.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	107	Personal Fire Safety	3.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	121	Fire Apparatus and equipment	3.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	122	Fire Hydraulics	3.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	123	Fire Investigation	3.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	124	Fire Related Codes and Ordinances	3.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	125	Firefighting Tactics and Strategy	3.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	126	Fire Company Organization and Management	3.0
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES	127	Public Safety Records and Reports	3.0

Transferable courses from the California Fire Academy require Program Director or Discipline Coordinator approval.

CHAPTER 10
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES COURSE OUTLINES COURSE OUTLINE APPROVAL SHEET

NAME, NUMBER, TITLE
REQUIRED COURSES:

CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES, 001, FITNESS AND CAREER PROGRESS ASSESSMENT I

(If name, number or title is being revised, above should reflect the NEW information;)
(AND, the complete former course name MUST be included in the CATALOG ENTRY below.)

* NEW _____ REVISION WITH _____ CATALOG CHANGES _____

DELETION _____ REVISION WITH _____ CLASS SCHEDULE CHANGES _____

DIVISION DEAN SIGNATURE _____ DATE _____

CATALOG ENTRY (60 word limit; underline changes if a revision)

California Fire and Emergency Management Services 001, Fitness & Career Progress Assessment I
Units: .5
Class hours: 8 lecture, 4 laboratory.
Prerequisite: CFEMS 106 and concurrent enrollment in CFEMS Program
Advisory reading level: 4.
A physical fitness and career progress assessment to assist students in reevaluating career choice, documenting progress made toward career goals, developing a progress record and evaluating the job market.
Grade: CR/NCR only. Fall, Spring.

CLASS SCHEDULE ENTRY (368 character limit; underline changes if a revision)

[California Fire and Emergency Management Services 001, Fitness & Career Progress Assessment I]
Units: .5 Class hours: 8 lecture, 4 laboratory.
Prerequisite: CFEMS 106 and concurrent enrollment in CFEMS Program
Advisory reading level: 4.
A physical fitness and career progress assessment to assist students in reevaluating career choice, documenting progress made toward career goals, developing a progress record and evaluating the job market.
Advisory reading level: 4.

If arranged hours are listed in catalog entry above, check one: Course_____ Week_____
Is this course cross-listed with another course? (Same as) Yes Subject ID. No
Have all departments who offer this course for a degree option, elective or certificate, been advised of the changes? Yes No

Major Code _____; Required _XX_ Elective _____ Method of Instruction _____

Number of times course is repeatable _0_ (Maximum three without prior approval of VCAA)

Classification Code _I_ Transfer Code _1_ Budgetary Unit Code _____

Instructor LHE: Lecture _____ Laboratory ___ SAM Priority Code _C_

Co/Prerequisite Approval Code_____
Co/Prerequisite Courses Required 2
Co/Prerequisite Message (Limit to 10 characters) See Catalog _____ (i.e.: see catalog)

Subject I.D._____ Proposed by _____ Date _____
Advisory Committee Approval Date _____
Division Curr Committee Date _____ Curriculum Council Approval Date _____
Division curriculum Chair/Co-Chair _____ Date _____
(SIGNATURE INDICATES COMMITTEE REVIEW & APPROVAL OF ADVISORY READING LEVEL PER BOARD POLICY)

COURSE OUTLINE NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 001,
Fitness & Career Progress Assessment

Curriculum Council Approval Date _____

CATALOG ENTRY
California Fire and Emergency Management Services 001,
Fitness & Career Progress Assessment
Units: .5
Class hours: 8 lecture, 4 laboratory.
Prerequisite: CFEMS 106 and concurrent enrollment in CFEMS Program
A physical fitness and career progress assessment to assist students in reevaluating career choice, documenting progress made toward career goals, developing a progress record and evaluating the job market.
Advisory reading level: 4.

COURSE PURPOSE
To provide students with information, demonstrations, assessments and directions in evaluating career choice, documenting progress made toward career goals, incorporating the progress record into the resume, examining opportunities in the job market, identifying improvement areas and strategies.

How does this course respond to issues of multiculturalism? (e.g., reading, techniques to differing learning styles, specific topics, specific assignments).

COURSE MATERIALS
Required texts and/or materials. (include price and date of publication.)
Instructor handouts.
Recommended readings and/or materials.
Other.

PLAN OF INSTRUCTION
Page 2
NAME, NUMBER, TITLE

California Fire and Emergency Management Services 001, Fitness & Career Progress Assessment

Major Segmemts of Course Content, Time Required, and What the Student is Expected to Learn.

HOW DO THESE COURSE SEGMENTS REQUIRE CRITICAL THINKING SKILLS, ABILITY TO APPLY "COLLEGE LEVEL" CONCEPTS, VOCABULARY AND LEARNING SKILLS?

CONTENT	LECTURE HOURS	DESCRIPTION
Evaluate, personal characteristics, themselves strengths, weaknesses, personal needs, environmental needs, skills, and abilities.	4 lecture hours	Student will learn about and personal attributes.
Comparing the job and personal profiles and	1 lecture hour	Student recognizes progress needs.
Record keeping and resume building and	2 lecture hours	Student learns record keeping resume building techniques.
Identification of improvement areas and development of strategies.	1 lecture hour	Student will learn developmental strategies.
PHYSICAL EXERCISE, TRAINING PROCEDURES AND PARTICIPATION.	4 laboratory hours	Physical Exercise to include a gradual warm-up of static stretching, calisthenics, and tower run. - 30 minutes. Cardiovascular conditioning running, aerobics on circuit course training. - 30 minutes. A gradual cool down to include static stretching, calisthenics, instructional techniques concerning injury prevention, and treatment.
	TOTAL HRS 12	

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services 001,
Fitness & Career Progress Assessment
(If name, number or title is being revised, above should reflect the NEW information)

WHAT METHODS WILL BE EMPLOYED TO HELP THE STUDENT LEARN?
Lectures, demonstrations, reading handouts, practice.

WHAT ACTIVITIES OR ASSIGNMENTS ARE REQUIRED OUTSIDE OF CLASS?
List activities and hours for each. (Must include reading and writing activities.)

Maintain personal records	= 2 hours.
Reading instructor handouts	= 2 hours.
Developing personal resume	= 4 hours.
Written assignments, develop personal guidelines for improvement with strategies	= 4 hours.

Required class hours 3 x 8	= 24
Classroom hours 1 x 8	= 8
Laboratory hours	= 4
Outside activities	= 12
Total class hours	= 24

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 001,
Fitness & Career Progress Assessment
(If name, number or title is being revised, above should reflect the NEW information)

STANDARDS OF ACHIEVEMENT
List graded activities.

Record keeping = 20%

Resume & personal assessment = 60%

Pre fitness test / post fitness test = 20%
Student will apply proper techniques of stretching to avoid injury before strenuous exercise and run 1.5 miles in 20 minutes or less.

How will student performance be graded? (Point scale or other measurement.)

Student shows improvement between pre and post assessments
Student's ability to follow rules, regulations and procedures.

80 - 100% = Credit
Below 80% = No Credit

COURSE OUTLINE APPROVAL SHEET

COURSE OUTLINE APPROVAL SHEET
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 007, Firefighter I Physical Agility

* NEW _____; REVISION WITH _____ CATALOG CHANGES

DELETION _____; REVISION WITH _____ CLASS SCHEDULE CHANGES

DIVISION DEAN SIGNATURE _____ DATE _____

CATALOG ENTRY (60 word limit; underline changes if a revision)
California Fire and Emergency Management Services, 007,
Firefighter I Physical Agility
Units: 0.1.
Class hours: 4 lecture/4 laboratory (total hours 8).
Prerequisite: Medical examination and/or completion of California Fire and Emergency Management Services, 106 (within one year period).
Advisory reading level: 3.
Designed to assess physical agility requirements. Grade: CR/NCR only. May be repeated.

CLASS SCHEDULE ENTRY (368 character limit; underline changes if a revision)
[California Fire and Emergency Management Services, 007, Firefighter I Physical Agility.]
0.1 Units. Assess physical agility requirements.
May be repeated. Grade: CR/NCR only.
Prerequisite: Medical examination and/or completion of California Fire and Emergency Management Services, 106 (within one year period).
Advisory reading level: 3.

If arranged hours are listed in catalog entry above, check one: Course_____ Week_____
Is this course cross-listed with another course? (Same as) Yes Subject ID. No
Have all departments who offer this course for a degree option, elective or certificate, been advised of the changes? Yes No

Major Code _____; Required _XX_ Elective _____ Method of Instruction 30

Number of times course is repeatable _3_ (Maximum three without prior approval of VCAA)

Classification Code _I_ Transfer Code _1_ Budgetary Unit Code _____

Instructor LHE: Lecture _____ Laboratory ___ SAM Priority Code _C_

Co/Prerequisite Approval Code_____
Co/Prerequisite Courses Required 3
Co/Prerequisite Message (Limit to 10 characters) See Catalog _____ (i.e.: see catalog)

Subject I.D._____ Proposed by _____ Date _____
Advisory Committee Approval Date _____
Division Curr Committee Date _____ Curriculum Council Approval Date _____
Division curriculum Chair/Co-Chair _____ Date _____
(SIGNATURE INDICATES COMMITTEE REVIEW & APPROVAL OF ADVISORY READING LEVEL PER BOARD
Revision Date _____

COURSE OUTLINE
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 007, Firefighter I Physical Agility

CURRICULUM COUNCIL APPROVAL DATE _____

CATALOG ENTRY
California Fire and Emergency Management Services, 007,
Firefighter I Physical Agility
Units: 0.1.
Class hours: 4 lecture/4 laboratory (total hours 8).
Prerequisite: Medical examination and/or completion of California Fire and Emergency Management Services, 106 (within one year period).
Advisory reading level: 3.
Designed to assess physical agility requirements. Grade: CR/NCR only. May be repeated. Fall, Spring.

COURSE PURPOSE
To assist firefighter candidates to demonstrate required physical capability.

How does this course respond to issues of multiculturalism? (e.g., reading, techniques for differing learning styles, specific topics, specific assignments).

COURSE MATERIALS
Required texts and/or materials. (include price and date of publication.)

NFPA 1001, FIREFIGHTER PROFESSIONAL QUALIFICATIONS, 1992 edition, $20.80.

NFPA 1582, MEDICAL REQUIREMENTS FOR FIREFIGHTERS, 1992 edition, $20.80.

Instructor handouts.

Recommended reading and/or materials.

IFSTA 200, ESSENTIALS OF FIREFIGHTING, International Fire Service Training Association, Stillwater, Oklahoma, 3rd edition, $20.00.

Other.
PHYSIOLOGY OF FITNESS, Sharkey, Brian S., Human Kinetics, 1989, $15.95

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 007, Firefighter I Physical Agility

MAJOR SEGMENTS OF COURSE CONTENT, Time Required, and What the Student is Expected to Learn.

HOW DO THESE COURSE SEGMENTS REQUIRE CRITICAL THINKING SKILLS, ABILITY TO APPLY "COLLEGE LEVEL" CONCEPTS, VOCABULARY AND LEARNING SKILLS?

TEST PREPARATION.	1 hour	Discuss how students should physically and nutritionally prepare themselves for optimal performanc on the physical agility test.
SAFETY	1 hour	Describe proper body mechanics and safety measures for completion of each agility event. Back safety, hydration and proper handling of equipment is discussed.
STUDENT EVALUATIONS AND MANIPULATIVE TESTING	6 hours	Each agility event is described and demonstrated. Safety and performance is discussed. Each student is observed going through the agility. Upon completion of all events students areinformed on what measures can betaken to performance. Includesspecific exercise, nutritional and body mechanic recommendations.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 007, Firefighter I Physical Agility

WHAT METHODS WILL BE EMPLOYED TO HELP THE STUDENT LEARN?
Videotape, lecture, demonstration, and performance, evaluations.

WHAT ACTIVITIES OR ASSIGNMENTS ARE REQUIRED OUTSIDE OF CLASS?
List activities and hours for each. (Must include reading and writing activities.)

Required class hours .1 x 48	= 4.8
Required classroom hours	= 8.0
Minimum required outside hours	= 0
Outside activities:	= 0

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 007, Firefighter I Physical Agility

STANDARDS OF ACHIEVEMENT
List graded activities.

Stair climb, hose hoist, roof ventilation, climb, crawl, drag, joist walk, halyard pull, advance hose line, and 1.5 mile run.

Student will be timed during performance of continuous events. Student will use information from lecture preceding and following practical test to develop an exercise program to improve physical agility skills.

How will student performance be graded? (Point scale or other measurement.)

To receive credit, student must attend 100% of the sessions, participate in 100% of all sessions, satisfactorily demonstrate ability to perform all above activities.

In accordance with Fire Advisory Committee standards.

Performance of each physical agility event in standard time or less = Credit

Failure to perform each physical agility event in standard time = No Credit

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 007, Firefighter I Physical Agility

COURSE OVERVIEW PHYSICAL AGILITY

007 PHYSICAL AGILITY CLASS

0.1 UNITS

CREDIT / NO CREDIT CLASS

CLASS DESCRIPTION:
To receive credit in the 007 class, each student must successfully complete the continuous agility test. The class begins with a lecture describing the physical agility events and how a candidate should prepare themselves for the test. Principles of aerobic and anaerobic conditioning are discussed. Injury prevention and proper body mechanics are also presented. Upon completion of the lecture portion all students will proceed to the grinder where they will watch a demonstration of each agility event. Students will be given an opportunity at this time to don turnout coats and breathing apparatus to practice moving with this equipment. Students will be arbitrarily assigned a number and tested on the physical agility events.

GRADING PROCEDURE:
Student must attend 100% of the lecture and complete the Agility test without disqualification in 6 minutes are less to receive a Credit Grade.

STUDENTS MUST HAVE TAKEN A MEDICAL EXAM OR COMPLETED CFEMS 106 TO PARTICIPATE IN THIS CLASS.

COURSE OUTLINE APPROVAL SHEET
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 060, Basic Academy

* NEW _____; REVISION WITH _____ W/O _____ CATALOG CHANGES

DELETION _____; REVISION WITH _____ W/O _____ CLASS SCHEDULE CHANGES

DIVISION DEAN SIGNATURE_____ DATE _____

CATALOG ENTRY (60 word limit; underline changes if a revision)
California Fire and Emergency Management Services, 060
Basic Academy
Units: 12.
Class hours: 160 lecture, 352 laboratory, (total hours 512).
Prerequisite: Grade "C" or better in California Fire and Emergency Management Services 101, 102, 103, 104, 105, 106, 107, 001, 002, 007; satisfactory score on CBAPT test, counseling, meet NFPA 1582 medical assessment, and concurrent enrollment in CFEMS 008, and 100.
Advisory reading level: 4.
California State Board of Fire Services/Firefighter I approved, criteria available.

CLASS SCHEDULE ENTRY (368 character limit; underline changes if a revision)
[California Fire and Emergency Management Services, 060 Basic Academy.]
12 units. Meets requirements of CSBFS/Cert Firefighter Training and
local criterion. Prerequisite: Grade "C" or better in California Fire and Emergency Management Services 101, 102, 103, 104, 105, 106, 107, Academy 001; 002; 007; satisfactory score on CBAPT, counseling, meet NFPA 1582 medical, concurrent enrollment in CFEMS 008.
Advisory reading level: 4.

If arranged hours are listed in catalog entry above, check one: Course_____ Week_____
Is this course cross-listed with another course? (Same as) Yes Subject ID. No
Have all departments who offer this course for a degree option, elective or certificate, been advised of the changes? Yes No

Major Code _____; Required _____ Elective _____ Method of Instruction __30____

Number of times course is repeatable _0_ (Maximum three without prior approval of VCAA)

Classification Code _I_ Transfer Code _1_ Budgetary Unit Code _____

Instructor LHE: Lecture _____ Laboratory ___ SAM Priority Code _B

Co/Prerequisite Approval Code_____
Co/Prerequisite Courses Required 10
Co/Prerequisite Message (Limit to 10 characters) See Catalog _____ (i.e.: see catalog)

Subject I.D._____ Proposed by _____ Date _____
Advisory Committee Approval Date _____
Division Curr Committee Date _____ Curriculum Council Approval Date _____
Division curriculum Chair/Co-Chair _____ Date _____
(SIGNATURE INDICATES COMMITTEE REVIEW & APPROVAL OF ADVISORY READING LEVEL PER BOARD POLICY)

COURSE OUTLINE
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 060, Basic Academy

CURRICULUM COUNCIL APPROVAL DATE _____

CATALOG ENTRY
California Fire and Emergency Management Services, 060
Basic Academy
Units: 8.
Class hours: 436 Hours Lecture/lab.
Prerequisite: Grade of "C" or better in California Fire and Emergency Management Services 101, 102, 103, 104, 105, 106, 107, 102, 001; 002; 007; satisfactory score on CBAPT, counseling, and meet NFPA 1582 medical, and concurrent enrollment in CFEMS 008.
Advisory reading level: 4.
California State Board of Fire Services/Firefighter I approved, criteria available.

COURSE PURPOSE
To prepare the student to meet the entry level requirements of the firefighter's occupation.

The student will be instructed in the proper use of standard fire department apparatus and equipment, evolution's with hose, ladders, ropes and knots, small tools and equipment, salvage covers and fire extinguishment techniques, etc., in accordance with the State Board of Fire Services. Manipulative skills demonstrated by the student must meet the standards established by the local fire agencies, associations and unions.

How does this course respond to issues of multiculturalism? (e.g., reading, techniques for differing learning styles, specific topics, specific assignments).

Students read handouts and articles on interacting with other cultures during emergency incidents.

COURSE MATERIALS
Required texts and/or materials. (include price and date of publication.)

IFSTA, ESSENTIALS OF FIRE FIGHTING, #35103, International Fire Service Training Association, Stillwater, Oklahoma,3rd or latest edition, $33.25.

EMERGENCY CARE AND TRANSPORTATION OF THE SICK AND INJURED, Committee of Injuries, American Academy of Orthopedic Surgeons, 5th or latest edition, $29.15.

Controlled Notes $4.45.

Skills Proficiency workbook $5.

Recommended reading and/or materials.
Various periodical articles, texts, references, or materials authored by module instructors. These will be provided by the college library reserve system or by the instructor.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 060, Basic Academy

MAJOR SEGMENTS OF COURSE CONTENT, Time Required, and What the Student is Expected to Learn.
HOW DOES THIS PLAN OF INSTRUCTION REQUIRE CRITICAL THINKING SKILLS, ABILITY TO APPLY "COLLEGE LEVEL" CONCEPTS, VOCABULARY AND LEARNING SKILLS?
The student will evaluate a fire problem and using fire fighting and safety equipment available, analyze the problem and take the appropriate action to safely extinguish the fire.

HOSE OPERATION.	52 hours lec./lab	Proper methods of hose evolution's.
FORCIBLE ENTRY.	8 hours lec./lab.	Techniques to gain entry into buildings.
FIRE CONTROL.	8 hours lec./lab.	Fire control evolution's.
LADDER OPERATIONS.	48 hours lec./lab.	Proper ladder operations.
ROPES AND KNOTS/SMALL TOOLS AND EQUIPMENT.	24 hours lec./lab.	Knowledge of all ropes and knots procedures, a working knowledge of tools and equipment.
SALVAGE OPERATIONS.	24 hours lec./lab.	Proper procedures for salvage operations.
FIRE PREVENTION/	24 hours lec./lab.	Fire prevention practices & investigation procedures
WILDLAND FIRE CONTROL.	12 hours lec./lab.	Working knowledge of wildland fire control.
BREATHING APPARATUS/ SEARCH & RESCUE.	24 hours lec./lab.	Use of breathing apparatus; search and rescue procedures.
VENTILATION.	24 hours lec./lab.	Basic procedures for ventilation.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 060, Basic Academy

Required:

COMBINED DRILL knowledge.	8 hours lec./lab.	Simultaneous operations requiring comprehensive skills and
EMERGENCY MANAGEMENT PRACTICES		40 hours lec/lab. Exercises in law enforcement, HAZ mats, earthquake, floods, and other community conditions
TESTING AND EVALUATION	8 hours lec./lab.	Combined drill and written test.
HAZARDOUS MATERIALS	24 hours lec./lab.	Recognition of hazardous materials situations and safety procedures.
FACILITIES MAINTENANCE fire	8 hours lec./lab.	Proper procedures for maintaining station facilities.
AUTO EXTRICATION of	16 hours lec./lab.	Skills and procedures for extrication trapped Persons (vehicles).
COMMUNICATIONS	4 hours lec./lab.	Radio communications and handset operation

Total required hours: 356

Future Goal:

HEAVY RESCUE of Machinery	40 hours lec./lab.	Skills and procedures for extrication trapped persons. (Bldg.- etc...)
P.C. 832	40 hours lec./lab.	Law of arrest, evidence preservation, suspect control

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 060, Basic Academy

WHAT METHODS WILL BE EMPLOYED TO HELP THE STUDENT LEARN?

Hands-on, lectures, field training, films, overheads, field trips, slides, special demonstrations, student participation, special
equipment.

WHAT ACTIVITIES OR ASSIGNMENTS ARE REQUIRED OUTSIDE OF CLASS?
List activities and hours for each. (Must include reading and writing activities.)

Required class hours 11 x 48	= 528
Required classroom hours	= 436
Minimum required outside activities	= 92

Outside activities:

15 hours/wk.	Reading assignments from text, handouts and notebook assignment.(165 hours)
5 hours/wk. (55 hours)	Practice basic skills (i.e. knots, bandaging).

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 060, Basic Academy

STANDARDS OF ACHIEVEMENT

List graded activities.

Quizzes	10% of total grade
Final Written	30% of total grade
Final Manipulative	35% of total grade
Notebook	15% of total grade
EMT-FS Final	10% of total grade.

How will student performance be graded? (Point scale or other measurement.)

A score of 80% minimum required to pass on all written quizzes and one final exam. Manipulative tests requiring completion of all tasks without assistance. Failure of any one task dictates failure of manipulative test.

Manipulative skill grading criteria:

1. Each required skill operation must be completed.
2. Each required skill operation must be accomplished in a manner safe to all.
3. Each required skill operation must be accomplished so as not to impede the completion of the overall operation.
4. The performance of the skill shall not cause damage to any equipment or materials.

Grading Scale:

94 - 100 points	= A
87 - 93.99 points	= B
80 - 86.99 points	= C
Below 80 points	= F

Cheating:
A member of the fire service enjoys an enormous amount of trust and respect from the public. As such, any person who has a tendency towards lying, cheating or stealing has no place in the fire service.

Any student who cheats or attempts to cheat will be immediately dropped from the academy.
Any student who allows his or her paper to be copied will be considered to be a party to cheating as well and will be dropped from the academy.

COURSE OUTLINE APPROVAL SHEET
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 100, Emergency Medical Technician-1-Basic

* NEW _____; REVISION WITH _____ CATALOG CHANGES

DELETION _____; REVISION WITH _____ CLASS SCHEDULE CHANGES

DIVISION DEAN SIGNATURE ____ DATE _____

CATALOG ENTRY (60 word limit; underline changes if a revision)
California Fire and Emergency Management Services, 100
Emergency Medical Technician-1-Basic
Units: 6.
Class hours: 77 lecture, 51 laboratory, (total hours 128).
Prerequisite: None.
Advisory Reading Level: 4.
Basic course for EMT-1. Satisfies requirements for County/State EMS Authority.
Prepares students to take certifying exam. (Same as EMT)
NO Credit for students who have completed EMT 100.

CLASS SCHEDULE ENTRY (368 character limit; underline changes if a revision)
[California Fire and Emergency Management Services, 100 Emergency Medical Technician-1-Basic.]
5 Units. Basic course for EMT-1 ambulance or non-ambulance (FS). Additional courses required for EMT-1 ambulance or non-ambulance certification.
Advisory Reading Level: 4.

If arranged hours are listed in catalog entry above, check one: Course_____ Week_____
Is this course cross-listed with another course? (Same as) Yes Subject ID. No
Have all departments who offer this course for a degree option, elective or certificate, been advised of the changes? Yes___ No___

Major Code _____; Required _XX_ Elective _____ Method of Instruction _____

Number of times course is repeatable _0_ (Maximum three without prior approval of VCAA)

Classification Code ___ Transfer Code __ Budgetary Unit Code _____

Instructor LHE: Lecture _____ Laboratory ___ SAM Priority Code _C_

Co/Prerequisite Approval Code_____
Co/Prerequisite Courses Required _____
Co/Prerequisite Message (Limit to 10 characters) See Catalog _____ (i.e.: see catalog)

Subject I.D._____ Proposed by _____ Date _____
Advisory Committee Approval Date _____
Division Curr Committee Date _____ Curriculum Council Approval Date _____
Division curriculum Chair/Co-Chair _____ Date _____
(SIGNATURE INDICATES COMMITTEE REVIEW & APPROVAL OF ADVISORY READING LEVEL PER BOARD POLICY)

COURSE OUTLINE
NAME, NUMBER, TITLE

California Fire And Emergency Management Services, 100, Emergency Medical Technician-1-Basic

CURRICULUM COUNCIL APPROVAL DATE _____

CATALOG ENTRY
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 100
Emergency Medical Technician-I-Basic
Units: 5.
Class hours: 73 lecture, 23 laboratory, (total hours 96).
Prerequisite: None.
Advisory Reading Level: 4.
Basic course for EMT-1 ambulance or non-ambulance (FS). Partially satisfies requirements for County/State EMS Authorities and CFSTES. Additional course required for EMT certification. Fall, Spring.

COURSE PURPOSE
To provide a basic EMT-1 course to meet state law that also meets the requirement for both EMT-1/ambulance or EMT-1/non-ambulance.

To provide the student with basic information and skills to allow his/her advancement to an EMT-1/ambulance or non-ambulance module and certification.

How does this course respond to issues of multiculturalism? (e.g., reading, techniques for differing learning styles, specific topics, specific assignments).

COURSE MATERIALS
Required texts and/or materials. (include price and date of publication.)

EMERGENCY CARE AND TRANSPORTATION OF THE SICK AND INJURED, Committee of Injuries, American
Academy of Orthopedic Surgeons. 5th Edition 1993, Price $33.55.

EMERGENCY MEDICAL TECHNICIAN 1/FIRE SERVICE SKILLS PROFICIENCY EXAMS. Sept. 1982, $4.75.
Recommended reading and/or materials.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 100, Emergency Medical Technician-1-Basic

MAJOR SEGMENTS OF COURSE CONTENT, Time Required, and What the Student is Expected to Learn.

OVERVIEW OF EMERGENCY MEDICAL TECHNOLOGY AND MEDICAL LEGAL RAMIFICATIONS.	4 hours lecture.	Role and responsibility of the EMT-1; legal aspects of field emergency care; introduction of medical terminology.
INTRODUCTION TO BASIC ANATOMY AND PHYSIOLOGY.	4 hours lecture.	Topographical anatomy and internal systems.
CARDIOPULMONARY ANATOMY AND PHYSIOLOGY.	8 hours lecture.	Circulatory and respiratory systems.
TERMINOLOGY RELATED TO VITAL FUNCTIONS; MAINTENANCE OF VITAL FUNCTIONS.	8 hours lecture.	CPR, artificial ventilation, cardiac arrest, shock, acute abdomen/ respiratory problems.
PERFORMANCE OF PRIMARY AND SECONDARY SURVEY.	12 hours lecture. system.	Airway obstruction, pulmonary arrest, RTDB, barrel hoop, genito-urinary
PEDIATRICS AND OB/GYN AND MEDICALEMERGENCIES.	12 hours lecture. poisoning, diabetes, coma.	Emergency childbirth, pediatric incidents, burns, asthma, choking,
TRAUMA, BLEEDING, SKELETAL INJURIES, SOFT TISSUE INJURIES.	12 hours lecture.	Homeostasis, splints, body support to minimize morbidity.
EMOTIONAL DIFFICULTIES.	4 hours lecture. patients.	Handling unruly, disoriented, agitated
TRANSPORTATION AND STABILIZATION OF SICK AND INJURED PATIENTS; PATIENT LIFE SUPPORT DURING EXTRICATION.	9 hours ;lecture.	Reducing morbidity/injury exacerbation with appropriate use of adjuncts; patient assessment in an “on-going” basis.
SKILLS PROFICIENCY.	23 hours lab. skills used by the EMT-I-FS.	Proficiency in 30 separate hands-on

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 100, Emergency Medical Technician-1-Basic

WHAT METHODS WILL BE EMPLOYED TO HELP THE STUDENT LEARN?
Lectures, demonstrations, student activities, films, field trip, simulations of field rescue procedures and stabilization
techniques (prior to transporting the victim).

WHAT ACTIVITIES OR ASSIGNMENTS ARE REQUIRED OUTSIDE OF CLASS?
List activities and hours for each. (Must include reading and writing activities.)

Required class hours 5 x 48 = 240
Required classroom hours = 96
Minimum required outside hours = 144
Outside activities:

30 hours— Read first half of text and outline chapters on cardiovascular/cardiopulmonary anatomy/ physiology and pathology. Define medical terms on vocabulary (in writing).

30 hours— Read second half of test and outline chapters on OB/GYN/Peds emergencies, internal injuries and skeletal injuries.

30 hours— Read and outline supplementary chapters in text on extrication and field rescue; study manipulative skills manual; read instructor supplied handouts on field rescues and patient immobilization.

30 hours— Write a 5 page (typed, one side, double spaced) term paper on an EMT topic approved by the instructor.

30 hours— Review controlled notes and prepare an EMT notebook containing class notes, newspaper clippings on assigned areas of interest, textbook chapter outlines, a field trip report, and a 600 word essay on EMT-1 ethics, standards of practice, and Title 22 regulations effecting EMT-I certification and rectification.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 100, Emergency Medical Technician-1-Basic

STANDARDS OF ACHIEVEMENT

List graded activities.

Quizzes	= 15% of total grade.
Midterm examination	= 15% of total grade
Final examination	= 40% of total grade
Projects	= 25% of total grade
Participation and attendance	= 5% of total grade

Final exam must be passed for successful completion of this course. All manipulative skills must be demonstrated properly by the student for successful completion of this course.

1. Manipulative skills demonstrations will require the student to evaluate symptoms and other patient data supplied by the instructor and determine appropriate courses of action. The student will be asked to predict logical outcomes or consequences of EMT practice decisions.

2. The student will complete two writing assignments requiring library research skills, organizing data, and producing coherent products. The student will have to judge the applicability of researched articles to his/her assignment (and find un-stated assumptions or author biases in the researched articles).

3. The student will rank pre-hospital emergency medical conditions in terms of their mortality/morbidity potential and be able to use this abstract scale to comply with EMT-I level triage.

How will student performance be graded? (Point scale or other measurement.)

90 - 100%	= A
80 - 89%	= B
70 - 79%	= C
Below 70%	= F

COURSE OUTLINE APPROVAL SHEET
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 101, Fire Protection Organization

NEW _____; REVISION WITH _____ W/O_____ CATALOG CHANGES

DELETION ____; REVISION WITH _____ W/O_____ CLASS SCHEDULE CHANGES

DIVISION DEAN SIGNATURE _____ DATE _____

CATALOG ENTRY (60 word limit; underline changes if a revision)
California Fire and Emergency Management Services, Technology, 101
Units: 3.
Class hours: 3 lecture.
Prerequisite: None.
Advisory reading level: 4.
Survey of career opportunities in California Fire and Emergency Management Services and related fields; history of fire protection; fire loss analysis; public, quasi-public and private fire protection services; specific fire protection functions; fire chemistry and physics.

CLASS SCHEDULE ENTRY (368 character limit; underline changes if a revision)
[California Fire and Emergency Management Services, Technology, 101] 3 Units. Survey of the fire service and fire protection; career opportunities; history; fire loss analysis; public, quasi-public and private fire protection; specific fire protection functions; chemistry and physics. Advisory reading level: 4.

If arranged hours are listed in catalog entry above, check one: Course_____ Week_____
Is this course cross-listed with another course? (Same as) Yes Subject ID. No
Have all departments who offer this course for a degree option, elective or certificate, been advised of the changes? Yes No

Major Code _____; Required _XX_ Elective _____ Method of Instruction _10_____

Number of times course is repeatable _0_ (Maximum three without prior approval of VCAA)

Classification Code _I_ Transfer Code _2_ Budgetary Unit Code _____

Instructor LHE: Lecture _____ Laboratory ___ SAM Priority Code _C_

Co/Prerequisite Approval Code_____
Co/Prerequisite Courses Required 0
Co/Prerequisite Message (Limit to 10 characters) See Catalog _____ (i.e.: see catalog)

Subject I.D._____ Proposed by _____ Date _____
Advisory Committee Approval Date _____
Division Curr Committee Date _____ Curriculum Council Approval Date _____
Division curriculum Chair/Co-Chair _____ Date _____
(SIGNATURE INDICATES COMMITTEE REVIEW & APPROVAL OF ADVISORY READING LEVEL PER BOARD POLICY)

COURSE OUTLINE
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 101, Fire Protection Organization

CURRICULUM COUNCIL APPROVAL DATE _____

CATALOG ENTRY
California Fire and Emergency Management Services,
Technology, 101
Units: 3.
Class hours: 3 lecture.
Prerequisite: None.
Advisory reading level: 4.
Survey of career opportunities in fire service and related fields, history of fire protection; fire loss analysis; public, quasi-public and private fire protection services; specific fire protection functions; fire chemistry and physics.

COURSE PURPOSE
To introduce the subject of related technology, to persons seeking employment or promotion in the California Fire and Emergency Management Services,; to explain career opportunities; to advise and redirect individuals not suited for careers in Fire and Emergency Management Services activities, to provide alternative career options; to stress the overall problems related to Fire and Emergency Management Services in society; to explore past and present methods of dealing with these problems, to contrast the relative effectiveness of specific Fire and Emergency Management Services functions when dealing with these problems.

How does this course respond to issues of multiculturalism? (e.g., reading, techniques for differing learning styles, specific topics, specific assignments).

COURSE MATERIALS
Required texts and/or materials. (include price and date of publication.)

Principles of Fire Protection, Rev. 1993, NFPA, latest edition, $57.85

Recommended readings and/or materials.
FIRE PROTECTION HANDBOOK, 1991, 17th edition, National Fire Protection Association, 60 Batterymarch St., Boston, MA $118.15.

FIREFIGHTER PROFESSIONAL QUALIFICATIONS, 1992, NFPA No. 1582, National Fire Protection Association, 470 Atlantic Avenue, Boston, MA 02210, $25.35

Other.

FINANCIAL IMPLICATIONS, IF ANY:

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 101, Fire Protection Organization

MAJOR SEGMENTS OF COURSE CONTENT, Time Required, and What the Student is Expected to Learn.

HOW DOES THIS PLAN OF INSTRUCTION REQUIRE CRITICAL THINKING SKILLS, ABILITY TO APPLY "COLLEGE LEVEL" CONCEPTS, VOCABULARY AND LEARNING SKILLS.
Students will write a paper on trends in fire protection (public and private) and the effect these trends will have on staffing and apparatus decisions.

CAREER OPPORTUNITIES IN FIRE AND EMERGENCY SERVICE
2.5 hrs. lecture
Course overview, history of public service, development of paid fire dept.;
development of insurance co., modern methods of prevention and control, fire
protection & defense. Careers in: fire protection, public education, sprinkler system design and installation, private and public fire service firefighting, fire apparatus operation, hazardous materials, emergency medicine and paramedic service.

ASSESSMENT OF PERSONAL QUALIFICATIONS
6.5 hrs. lecture
Assessment, analysis and documentation of physical and mental capabilities required for career candidates. Methods and procedures for documenting and promoting personal abilities and achievements in record keeping, resume building, job survey and job search. Develop methods for making career decisions. Design a plan and schedule to achieve career related education. Job search techniques.

PUBLIC SAFETY FOR PEOPLE AND PROPERTY.
2.5 hrs. lecture.
Life and property loss; fundamental building design, life safety codes, hazards of occupancies, types of occupancies, industrial fire protection, public education and community relations.

CHARACTERISTICS AND BEHAVIOR OF FIRE.
2.5 hrs. lecture.
Unpredictability of fire, sources of ignition, explosions, products of combustion.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 101, Fire Protection Organization

FIRE HAZARDS OF MATERIALS.
2.5 hrs.lecture.
Types of combustibles, solids, liquids, hazardous materials, flammable gasses, fire fighting and control.

INVESTIGATING THE FIRE LOSS PROBLEM.
2.5 hrs. lecture.
Need for investigation, recording the fire problem, analyzing fire losses.

FIRE SAFE BUILDING DESIGN CONSTRUCTION.
2.5 hrs. lecture.
Fundamentals of fire safety design, building and site planning for fire safety, exposure protection, confinement of smoke and fire.

MID TERM.
3 hrs. lecture.

FIRE PROTECTION SYSTEMS AND EQUIPMENT.
2.5 hrs. lecture.
Water as an extinguishing agent, sprinkler systems, foam extinguishing systems, carbon dioxide systems, dry chemical systems, extinguishing systems for combustible metal, portable fire extinguishers.

ALARM DETECTION SYSTEMS AND DEVICES.
2.5 hrs. lecture.
Public fire service communications, automatic and manual protective signaling devices, fire detection mechanisms & devices.

MUNICIPAL FIRE DEFENSES.
2.5 hrs lecture.
Evaluation and planning of public fire protection, master planning for fire protection, water for fire protection, water distribution systems.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 101, Fire Protection Organization

FIRE AND EMERGENCY MANAGEMENT SERVICES DEPARTMENT ORGANIZATION, ADMINISTRATION AND OPERATION.
2.5 hrs lecture.
Fire department organization, administration and management, fire suppression operations, fire prevention operations, public education, fire code enforcement.

FIRE AND EMERGENCY MANAGEMENT SERVICES ORGANIZATION INFORMATION SOURCES AND CAREER OPPORTUNITIES, THE SCOPE OF FIRE PROTECTION ORGANIZATIONS.
2.5 hrs lecture.
Various organizations that effect fire department operations from federal, state, county and local jurisdictions.

CODES & STANDARDS.
2.5 hrs lecture.
Development of fire protection regulations, formation and types of codes & standards, fire safety standards making organizations. The National Professional Qualifications systems established by the Joint Council of National Fire Service Organizations including 1001, 1002, 1021, 1031, 1041, et al.

ESTABLISHMENT OF NATIONAL STANDARDS OF PROFESSIONAL COMPETENCE FOR THE FIRE SERVICE.
2.5 hrs lecture.
Physical agility for firefighters, preparing for physical agility, the meaning of physical fitness, measuring physical fitness.

FINAL.
3 hrs. lecture.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 101, Fire Protection Organization

WHAT METHODS WILL BE EMPLOYED TO HELP THE STUDENT LEARN?
Lectures, visual aids, demonstrations, student activities, films, field trips, written assignments.

WHAT ACTIVITIES OR ASSIGNMENTS ARE REQUIRED OUTSIDE OF CLASS?
List activities and hours for each. (Must include reading and writing activities.)

Required class hours 3 x 48 = 144
Required classroom hours = 48
Minimum required outside hours = 96
Outside activities:

- 56 hours— Read text, handouts and periodicals
- 25 hours— Written essay and term project consisting of a comprehensive self analysis of, personal characteristics, strengths, weaknesses, skills, abilities, goals, objectives, with record keeping a resume models.
- 10 hours— Document a minimum of two appointments with academic or U.S. Department of Human Resources counselors to critique the term project. Attach a summary of comments to the term project.
- 5 hours— Computer search and field trip.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 101, Fire Protection Organization

STANDARDS OF ACHIEVEMENT
List graded activities.

Quizzes	30%
Mid-Term	20%
Final	30%
Term papers and assignments	20%

How will student performance be graded? (Point scale or other measurement.)

90% - 100%	= A
80% - 89%	= B
70% - 79%	= C
Below 70%	= F

COURSE OUTLINE APPROVAL SHEET
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 102, Fire Behavior and Combustion

NEW _____x_____; REVISION WITH _____ CATALOG CHANGES

DELETION _____; REVISION WITH _____ CLASS SCHEDULE CHANGES

DIVISION DEAN SIGNATURE _____ DATE _____

CATALOG ENTRY (60 word limit; underline changes if a revision)
California Fire and Emergency Management Services 102
Fire Behavior and Combustion
Units: 3
Class hours: 3 lecture.
Prerequisite: None.
Advisory reading level: 4.
Fundamentals and scientific principles of fire behavior, combustible materials, extinguishing agents, hazardous and toxic materials, forms of energy and fire prevention/suppression techniques.

CLASS SCHEDULE ENTRY (368 character limit; underline changes if a revision)
[California Fire and Emergency Management Services, Fire Behavior and Combustion 102]
3 Units.
Fundamentals and scientific principles of fire behavior, combustible materials, extinguishing agents, hazardous and toxic materials, and fire prevention/suppression techniques.
Prerequisite: None.
Advisory reading level: 4.

If arranged hours are listed in catalog entry above, check one: Course_____ Week_____
Is this course cross-listed with another course? (Same as) Yes Subject ID. No
Have all departments who offer this course for a degree option, elective or certificate, been advised of the changes? Yes No

Major Code _____; Required _____ Elective _____ Method of Instruction _____

Number of times course is repeatable ___ (Maximum three without prior approval of VCAA)

Classification Code ___ Transfer Code __ Budgetary Unit Code _____

Instructor LHE: Lecture _____ Laboratory ___ SAM Priority Code ___

Co/Prerequisite Approval Code_____
Co/Prerequisite Courses Required ___
Co/Prerequisite Message (Limit to 10 characters) See Catalog _____ (i.e.: see catalog)

Subject I.D._____ Proposed by _____ Date _____
Advisory Committee Approval Date _____
Division Curr Committee Date _____ Curriculum Council Approval Date _____
Division Curriculum Chair/Co-Chair _____ Date _____
(SIGNATURE INDICATES COMMITTEE REVIEW & APPROVAL OF ADVISORY READING LEVEL PER BOARD POLICY)
*Complete and attach New Course Proposal form.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 102, Fire Behavior and Combustion

CURRICULUM COUNCIL APPROVAL _____ DATE _____

CATALOG ENTRY (60 word limit; underline changes if a revision)
California Fire and Emergency Management Services, 102
Fire Behavior and Combustion
Units: 3
Class hours: 3 lecture.
Prerequisite: None.
Advisory reading level: 4.
Fundamentals and scientific principles of fire behavior, combustible materials, extinguishing agents, hazardous and toxic materials, forms of energy and fire prevention/suppression techniques.

COURSE PURPOSE
This introductory course applies physical science principles and simple calculations to practical applications in fire prevention, suppression, EMS, and Haz Mats; for entry Fire and Emergency Management Services students.

How does this course respond to issues of multiculturalism? (e.g. reading, techniques for differing learning styles, specific topics, specific assignments).

COURSE MATERIALS
Required texts and/or materials. (include price and date of publication.)
Essentials of Firefighter IFSTA 35103, 1993 Edition $23.40.

1990 Emergency Response Guidebook DOT P5800.5, US Department of Transportation, $5.95

Recommended reading and/or materials.
FIRE PROTECTION HANDBOOK, NFPA, Quincy Mass. 17th ed. 1991. $118.15.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 102, Fire Behavior and Combustion

MAJOR SEGMENTS OF COURSE CONTENT, Time Required, and What the Student is Expected to Learn.
HOW DOES THIS PLAN OF INSTRUCTION REQUIRE CRITICAL THINKING SKILLS, ABILITY TO APPLY "COLLEGE LEVEL" CONCEPTS, VOCABULARY AND LEARNING SKILLS.
Students will apply theoretical physical science principles to practical, field oriented, firefighting inspections, suppressions and salvage.

CONTENT	LECTURE HOURS	DESCRIPTION
Solids, dusts, liquids, gases, and fire hazard properties, Including flashpoint, explosive range, Vapor pressure, basic chemical Properties, thermal expansion and Heat related to tensile strength; Combustion by-products and Hazardous residues.	9	States of matter and the availability of oxygen to combustibles (Fire Tetrahedron) relationship of heat to loss of rigidity, incomplete combustion and poisonous gases.
Fire origins and preferred methods of extinguishment, including solid and liquid combustibles, flammable Gases, chemical and electrical Sources of fire.	6	Type A, B, C and D extinguishers and combinations, hazards of heavier than air gases, basic electrical hazards.
Simple machines and mechanical Advantage, basic hydraulics.	6	Practical applications of Physical Science to fire suppression and rescue, including jacks, levers, "jaws of life", ropes and pulleys, airbags, water pressure, pumps, friction losses, vectors of force and ladder lifting
Basic electrical theory, including Units of measure, (volts, ohms, Amps, watts, ac/dc, insulation Break-down voltage, current Handling capacity, hazards of induced and stored electrical charges), home wiring and color codes.	9	Safe electrical practices, inspection techniques,planning for adequate electrical utilization.
Heat transfer by conduction, Convection and radiation. Thermal insulation and reflection. Latent heat and specific heat. Exothermic and endothermic Chemical reactions.	6	Fire behavior related to ignition points and spreading, heat rise and sprinkler placement, why protective clothing is essential to a firefighter, heat sources from chemical combinations.
Chemical and physical changes and reactions, elements, compounds, Mixtures, acids, bases, salts, ph, Chemical families, oxidizers, organic Compounds, and an introduction to Hazardous materials.	12	California State Fire Marshal's Firefighter I level Hazmat prerequisite course standards.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 102, Fire Behavior and Combustion

WHAT METHODS WILL BE EMPLOYED TO HELP THE STUDENT LEARN?
Lecture, demonstrations, films, assignments and discussions.

WHAT ACTIVITIES OR ASSIGNMENTS ARE REQUIRED OUTSIDE OF CLASS?
List activities and hours for each. (Must include reading and writing activities.)

Required class hours 3 x 48 = 144
Required classroom hours = 48
Minimum required outside hours = 96
Outside activities:

10 hours - Comprehensive list of physical science concepts applications in the fire service
10 hours - Written report on hazardous material awareness from magazine article.
80 hours - Read text and complete handout assignments

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 102, Fire Behavior and Combustion

STANDARDS OF ACHIEVEMENT
List graded activities. .

5 quizzes
1 midterm
1 comprehensive final examination
1 term project

How will student performance be graded? (Point scale or other measurement.)

5 quizzes	= 20%
midterm	= 25%
final	= 30%
project	= 25%

Grading Scale:

90 - 100%	= A
80 - 89%	= B
70 - 79%	= C
Below 60%	= F

COURSE OUTLINE APPROVAL SHEET
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 103, Fire Protection Equipment and Systems

* NEW ___X_____; REVISION WITH _____ CATALOG CHANGES

DELETION _____; REVISION WITH _____ CLASS SCHEDULE CHANGES

DIVISION DEAN SIGNATURE _____ DATE _____

CATALOG ENTRY (60 word limit; underline changes if a revision)
California Fire and Emergency Management Services, 103,
Fire Protection Equipment and Systems
Units: 3.
Class hours: 3 lecture.
Prerequisite: CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 101,102, and concurrent enrollment in Sociology or Social Sciences; Multicultural Issues Within Public Safety or equivalent.
Advisory reading level: 4
Portable fire extinguishing equipment; protection systems for special hazards; sprinkler systems and fire detection and alarm systems.

CLASS SCHEDULE ENTRY (368 character limit; underline changes if a revision)
[California Fire and Emergency Management Services, 103, Fire Protection Equipment and Systems.]
3 Units. Portable fire extinguishing equipment; protection systems for special hazards; sprinkler systems, fire detection and alarm systems. Prerequisite: CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 101,102, and concurrent enrollment in Sociology or Social Sciences; Multicultural Issues Within Public Safety or equivalent.
Advisory reading level: 4.

If arranged hours are listed in catalog entry above, check one: Course_____ Week_____
Is this course cross-listed with another course? (Same as) Yes Subject ID. No
Have all departments who offer this course for a degree option, elective or certificate, been advised of the changes? Yes No

Major Code _____; Required _XX_ Elective _____ Method of Instruction _10_____

Number of times course is repeatable _0_ (Maximum three without prior approval of VCAA)

Classification Code _I_ Transfer Code _2_ Budgetary Unit Code _____

Instructor LHE: Lecture ___3___ Laboratory ___ SAM Priority Code _C_

Co/Prerequisite Approval Code 2
Co/Prerequisite Courses Required 3
Co/Prerequisite Message (Limit to 10 characters) See Catalog _____ (i.e.: see catalog)

Subject I.D._____ Proposed by _____ Date _____
Advisory Committee Approval Date _____
Division Curr Committee Date _____ Curriculum Council Approval Date _____
Division curriculum Chair/Co-Chair _____ Date _____
(SIGNATURE INDICATES COMMITTEE REVIEW & APPROVAL OF ADVISORY READING LEVEL PER BOARD POLICY)

COURSE OUTLINE
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 103, Fire Protection Equipment and Systems

CURRICULUM COUNCIL APPROVAL DATE _____

CATALOG ENTRY
California Fire and Emergency Management Services, 103,
Fire Protection Equipment and Systems
Units: 3.
Class hours: 3 lecture.
Prerequisite: CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 101,102, and concurrent enrollment in Sociology or Social Sciences; Multicultural Issues Within Public Safety or equivalent.
Advisory reading level: 4.
Portable fire extinguishing equipment; protection systems for special hazards;
sprinkler systems and fire detection and alarm systems.

COURSE PURPOSE
To understand the application of theory and principles of physical science in the regulation, design and placement of fi protection systems. Includes the classifications of fire, extinguishment methods, fire department concerns regarding sprinkle system installation, operation, maintenance, inspection, special hazards, and fixed and portable fire protection systems.

How does this course respond to issues of multiculturalism? (e.g. reading, techniques for differing learning styles, spec topics, specific assignments).

COURSE MATERIALS
Required texts and/or materials. (include price and date of publication.)
NFPA HANDBOOK, National Fire Protection Association, Boston, Mass., 17th Ed., 1991, $118.15.

Recommended reading and/or materials.

None

Other.

None

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 103
Fire Protection Equipment and Systems

MAJOR SEGMENTS OF COURSE CONTENT, Time Required, and What the Student is Expected to Learn.
HOW DOES THIS PLAN OF INSTRUCTION REQUIRE CRITICAL THINKING SKILLS, ABILITY TO APPLY "COLLEGE LEVEL" CONCEPTS, VOCABULARY AND LEARNING SKILLS.
Student will apply previously learned and newly acquired knowledge in simulated inspections of various devices in simulated occupancies, identifying any violation of codes.

CHARACTERISTICS OF FIRE.	3 lecture hours. Fire cause and effect and its relationship to systems.
DETECTORS AND SYSTEMS.	3 lecture hours. Types of detector systems, their design and operation; how they relate to extinguishing systems.
FIRE ALARM SYSTEMS.	3 lecture hours. Types of alarm systems, their design and Operation.
PORTABLE FIRE EXTINGUISHERS.	3 lecture hours. Types of extinguishers, their maintenance and location. Demonstration of portable extinguishers.
FIRE PROTECTION HARDWARE.	3 lecture hours. Fire doors/windows, panic hardware and emergency lights.
SPRINKLER SYSTEMS.	12 lecture hours. Design and operation of various types of systems; inspection and maintenance procedures. Demonstration of sprinkler operation.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 103, Fire Protection Equipment and Systems

Methods of how to relate to differences in cultural attitudes when dealing with minority owners and tenants.

WATER SUPPLY AND STANDPIPES.	3 lecture hours.	SPECIAL EXTINGUISHING SYSTEMS. 3 lecture hours. Systems used to protect special hazards that cannot be covered by standard systems.
SPECIAL HAZARD PROTECTION.	3 lecture hours.	Water supply for systems and yard hydrants; standpipe systems.
SYSTEMS APPLICATION.	3 lecture hours.	Alarm and monitoring systems for protecting special hazards.
INSPECTION PROCEDURES.	3 lecture hours.	Procedures for fire suppression personnel to react to various types of devices when system is activated, and how to reset the system.
SYSTEM TESTING.	3 lecture hours.	What to look for; do's and don'ts, documentation. How to interpret cultural impressions of assent and/or dissent when asking for compliance to code.
SMOKE DETECTORS & H.A.D.'s.	3 lecture hours.	Purpose, procedures and documentation.
		Ionization, temperature and transducer system operation and inspection.
	Total hours 48	

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 103
Fire Protection Equipment and Systems

WHAT METHODS WILL BE EMPLOYED TO HELP THE STUDENT LEARN?
Lecture, essays, projects, demonstrations, student activities, films, field-trips, simulation, slides, tests.

WHAT ACTIVITIES OR ASSIGNMENTS ARE REQUIRED OUTSIDE OF CLASS?
List activities and hours for each. (Must include reading and writing activities.)

Required class hours 3 x 48 = 144
Required classroom hours = 48
Minimum required outside activities = 96
Outside activities:

Reading:	text	40 hours
	periodicals	2 hours
	handouts	10 hours
Writing:	Term paper	24 hours
	Notebook editing	10 hours
Project:		10 hours -

Read local paper for articles on fire loss and analyze (where possible) the effect of Fire protection equipment and systems.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 103,
Fire Protection Equipment and Systems

STANDARDS OF ACHIEVEMENT
List graded activities.

Mid-Term	= 30%
Quizzes	= 15%
Final	= 30%
Term paper	= 15%
Note book	= 10%

How will student performance be graded? (Point scale or other measurement.)

90 - 100%	= A
80 - 89%	= B
70 - 79%	= C
Below 70%	= F

COURSE OUTLINE APPROVAL SHEET
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 104, Building Construction for Fire Protection

* NEW _____; REVISION WITH _____ CATALOG CHANGES

DELETION _____; REVISION WITH _____ CLASS SCHEDULE CHANGES
DIVISION DEAN SIGNATURE _____ DATE _____

CATALOG ENTRY (60 word limit; underline changes if a revision)
California Fire and Emergency Management Services, 104,
Building Construction for Fire Protection
Units: 3.
Class hours: 3 lecture.
Prerequisite: CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 101, 102, and Sociology or Social Sciences; Multicultural Issues Within Public Safety or equivalent.
Advisory reading level: 4.
Fundamentals of building construction as it relates to fire protection; classification of occupancy and types of construction with emphasis on fire protection features including: building equipment, facilities, fire resistant materials and high rise considerations.

CLASS SCHEDULE ENTRY (368 character limit; underline changes if a revision)
[California Fire and Emergency Management Services, 104, Building Construction for Fire Protection.]
3 Units.
Fundamentals of building construction as it relates to fire protection.
Prerequisite: CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 101,102, and Sociology or Social Sciences; Multicultural Issues Within Public Safety or equivalent.
level: 4.

If arranged hours are listed in catalog entry above, check one: Course_____ Week_____
Is this course cross-listed with another course? (Same as) Yes Subject ID. No
Have all departments who offer this course for a degree option, elective or certificate, been advised of the changes? Yes No

Major Code _____; Required _XX_ Elective _____ Method of Instruction _10_____

Number of times course is repeatable _0_ (Maximum three without prior approval of VCAA)

Classification Code _I_ Transfer Code _2_ Budgetary Unit Code _____

Instructor LHE: Lecture _____ Laboratory ___ SAM Priority Code _C_

Co/Prerequisite Approval Code_3__
Co/Prerequisite Courses Required 3
Co/Prerequisite Message (Limit to 10 characters) See Catalog _____ (i.e.: see catalog)

Subject I.D._____ Proposed by _____ Date _____
Advisory Committee Approval Date _____
Division Curr Committee Date _____ Curriculum Council Approval Date _____
Division curriculum Chair/Co-Chair _____ Date _____
(SIGNATURE INDICATES COMMITTEE REVIEW & APPROVAL OF ADVISORY READING LEVEL PER BOARD POLICY)

COURSE OUTLINE
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 104, Building Construction for Fire Protection

CURRICULUM COUNCIL APPROVAL DATE _____

CATALOG ENTRY
California Fire and Emergency Management Services, 104,
Building Construction for Fire Protection
Units: 3.
Class hours: 3 lecture.
Prerequisite: CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 101,102, and Sociology or Social Sciences; Multicultural Issues Within Public Safety or equivalent.
Advisory reading level: 4.
Fundamentals of building construction as it relates to fire protection; classification of occupancy and types of construction with emphasis on fire protection features including: building equipment, facilities, fire resistant materials and high rise considerations.

COURSE PURPOSE
To develop the ability to recognize building types, construction features; classification of occupancies, fire protection in building design and construction and predict the effect of fire; relate fire loads to occupancy classes; identify life safety hazards of buildings.

How does the course respond to issues of multiculturalism? (e.g. reading, techniques for differing learning styles, specific
topics, specific assignments).

COURSE MATERIALS
Required texts and/or materials. (include price and date of publication.)

BUILDING CONSTRUCTION FOR THE FIRE SERVICE, Brannigan, Francis, L., National Fire Protection Association, Boston, Massachusetts, 1992, 3rd Edition. $57.85

WIRING SIMPLIFIED, H. P. Richter & W. C. Schwan, Park Publishing, Inc., St. Paul, Minn. 37th Edition 1993. $4.95.

Recommended reading and/or materials.
UNIFORM BUILDING CODE, International Conference of Building Officials, Pasadena, CA, 1988, $54.45.
NATIONAL FIRE CODES, Volumes 4,5,9, National Fire Protection Association, Boston, MA, 1988, $54.45.
FIRE PROTECTION HANDBOOK, National Fire Protection Association, Boston, Mass. 17th Ed., 1991, $118.15.

Other.
FIRE PROTECTION THROUGH MODERN BUILDING CODES, American Iron and Steel Institute, New York, NY, 1981.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 104, Building Construction for Fire Protection

MAJOR SEGMENTS OF COURSE CONTENT, Time Required, and What the Student is Expected to Learn. HOW DOES THIS PLAN OF INSTRUCTION REQUIRE CRITICAL THINKING SKILLS, ABILITY TO APPLY "COLLEGE LEVEL" CONCEPTS, VOCABULARY AND LEARNING SKILLS.

Analyze and evaluate building construction types, describing characteristics of each when under attack from fire. Discuss and justify firefighting and safety procedures for each type.

CONTENT	LECTURE HOURS	DESCRIPTION
PRINCIPLES OF CONSTRUCTION	4.5 lecture hours	Definitions of loads, forces and reactions on columns, beams and other structural elements.
OCCUPANCY CLASSIFICATION	3 lecture hours	Fire and life safety hazards and construction requirements based on building uses and location on property (exposure protection)
CLASSIFICATION BY TYPES OF CONSTRUCTION	3 lecture hours	Codification of construction types UBC & NFPA
WOOD CONSTRUCTION	9 lecture hours	The effect of fire of conventional and lightweight wood frame constructions.
MASONRY, TILT-UP CONCRETE AND HEAVY TIMBER CONSTRUCTION	9 lecture hours	The effects of fire and collapse potential of constructions that utilize NC/ FR walls with combustible floors and roofs.
PRINCIPLES OF FIRE RESISTANCE (ENDURANCE), FIRE BEHAVIORS OF INTERIOR FINISHES IN BUILDINGS.	6 lecture hours	Ratings of fire resistance and special hazards of interior finishes that give off hazardous smoke when burning.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 104, Building Construction for Fire Protection

CONTENT	LECTURE HOURS	DESCRIPTION
STEEL CONSTRUCTIONS	3 lecture hours	The fire problems of steel in construction, NC and NC/FR buildings.
CONCRETE CONSTRUCTIONS	3 lecture hours	Fire and collapse problems of concrete Escape towers (stairs), ventilation problems of high rise fires, need for booster pumps at higher floors, elevator problems.
HIGH RISE CONSTRUCTION AND SMOKE MOVEMENT IN BUILDINGS.	3 lecture hours	Fire and smoke problems Escape towers (stairs), ventilation problems of high rise buildings elevator problems.
ELECTRICAL SYSTEMS IN BUILDINGS	4.5 lecture hours	Conductors, insulation, wire sizes, types and capacitors, overcurrent protection, grounding, grounds, bonding,service entrance, raceways and cables.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 104, Building Construction for Fire Protection

WHAT METHODS WILL BE EMPLOYED TO HELP THE STUDENT LEARN?
Lecture, demonstrations, student activities, films, field trips, simulation, & tests

WHAT ACTIVITIES OR ASSIGNMENTS ARE REQUIRED OUTSIDE OF CLASS?
List activities and hours for each. (Must include reading and writing activities.)

Required class hours 3 x 48	= 144
Required classroom hours	= 48
Minimum required outside activities	= 96
Outside activities:	
16 hours - reading assignments 1 hour per week.	= 16
16 hours - reading instructor handouts 1 hour per week	= 16
64 hours - research for essays and term project.	= 64

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 104, Building Construction for Fire Protection

STANDARDS OF ACHIEVEMENT

List graded activities.

Quizzes	= 25%
Midterm	= 20%
Final	= 35%
Projects	= 20%

How will student performance be graded? (Point scale or other measurement.)

90 - 100% = A
80 - 89% = B
70 - 79% = C
Below 70% = F

COURSE OUTLINE APPROVAL SHEET
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 105, Fire Prevention

* NEW _____; REVISION WITH ____ W/O _____ CATALOG CHANGES

DELETION _____; REVISION WITH _____W/O___ CLASS SCHEDULE CHANGES

DIVISION DEAN SIGNATURE _____ DATE _____
CATALOG ENTRY (60 word limit; underline changes if a revision)
California Fire and Emergency Management Services, 105,
Fundamentals of Fire Prevention
Units: 3.
Class hours: 3 lecture.
Prerequisite: CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 101,102, and Sociology or Social Sciences; Multicultural Issues Within Public Safety or equivalent.
Advisory reading level: 4.
Organization and function of fire prevention; inspections; surveying and mapping procedures; recognition of fire and life hazards; engineering a solution of a fire hazard; enforcing solutions to a fire hazard; public relations as effected by fire prevention.

CLASS SCHEDULE ENTRY (368 character limit; underline changes if a revision)
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 105, FUNDAMENTALS OF FIRE PREVENTION.
3 Units. Organization, function, inspection, surveying, mapping, recognizing and solving fire and life hazards; enforcing solutions & public relations. Prerequisite: CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 101, 102, and Sociology or Social Sciences; Multicultural Issues Within Public Safety or equivalent.
Advisory reading level: 4.

If arranged hours are listed in catalog entry above, check one: Course_____ Week_____
Is this course cross-listed with another course? (Same as) Yes Subject ID. No
Have all departments who offer this course for a degree option, elective or certificate, been advised of the changes? Yes No

Major Code _____; Required _XX_ Elective _____ Method of Instruction _10_____

Number of times course is repeatable _0_ (Maximum three without prior approval of VCAA)

Classification Code _I_ Transfer Code _2_ Budgetary Unit Code _____

Instructor LHE: Lecture _____ Laboratory ___ SAM Priority Code _C_

Co/Prerequisite Approval Code_____
Co/Prerequisite Courses Required 3
Co/Prerequisite Message (Limit to 10 characters) See Catalog _____ (i.e.: see catalog)

Subject I.D._____ Proposed by _____ Date _____
Advisory Committee Approval Date _____
Division Curr Committee Date _____ Curriculum Council Approval Date _____
Division curriculum Chair/Co-Chair _____ Date _____
(SIGNATURE INDICATES COMMITTEE REVIEW & APPROVAL OF ADVISORY READING LEVEL PER BOARD POLICY)
*Complete and attach New Course Proposal form.

COURSE OUTLINE
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 105, Fire Prevention

CURRICULUM COUNCIL APPROVAL DATE _____

CATALOG ENTRY
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 105
Fundamentals of Fire Prevention
Units: 3.
Class hours: 3 lecture.
Prerequisite: CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES 101, and 102 or equivalent.
Concurrent enrollment in Sociology or Social Sciences; Multicultural Issues Within Public Safety or equivalent.
Advisory reading level: 4.
Organization and function of fire prevention; inspections; surveying and mapping procedures; recognition of fire and li hazards; engineering a solution of a fire hazard; enforcing solutions to a fire hazard; public relations as effected by fire prevention.

COURSE PURPOSE
To introduce students and inexperienced firefighters to the basics of fire prevention; provide technical background; develop public education concepts; emphasize public relations techniques throughout the course. The students will be able to understand and perform a basic fire prevention inspection. Writing of violation notices for residential, and industrial buildings. Utilize enforcement procedures.

How does this course respond to issues of multiculturalism? (e.g. reading, techniques for differing learning styles, spec topics, specific assignments).

COURSE MATERIALS
Required texts and/or materials. (include price and date of publication.)

FUNDAMENTALS OF FIRE PREVENTION, William K. Bare, The Brady Company, 1991 edition, $51.90.

FIRE PROTECTION HANDBOOK, 17th Ed. 1991, National Fire Protection Association,
60 Batterymarch St., Boston 10, Mass, $118.15

Recommended reading and/or materials.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 105, Fire Prevention

MAJOR SEGMENTS OF COURSE CONTENT, Time Required, and What the Student is Expected to Learn.
HOW DOES THIS PLAN OF INSTRUCTION REQUIRE CRITICAL THINKING SKILLS, ABILITY TO APPLY "COLLEGE LEVEL" CONCEPTS, VOCABULARY AND LEARNING SKILLS.
Student will be able to analyze the conditions of a typical fire prevention scenario, identify appropriate action, anticipate related legal aspects and justify recommendations.

FIRE PREVENTION ORGANIZATION.	2 lecture hours	History of fire prevention and methods of organization.
FIRE CAUSES.	4 lecture hours	Accidents and arson.
FIRE PREVENTION LAWS, REGULATIONS AND STANDARDS.	4 lecture hours	Sources of authority.
RECORDS USED IN FIRE PREVENTION.	2 lecture hours	Utilization and maintenance procedures.
INSPECTION PROCEDURES.	2 lecture hours	Typical conditions, techniques.
BUILDING CONSTRUCTION.	2 lecture hours	Elements of building construction relating to fire prevention.
OCCUPANCY CLASSIFICATIONS.	3 lecture hours	Methods of identification and grouping.
FIRE PROTECTION EQUIPMENT IN PUBLIC AND PRIVATE BUILDINGS.	2 lecture hours	Sprinklers and standpipe inspection procedures.
FIRE HAZARDS BY OCCUPANCY.	2 lecture hours	Housekeeping, storage, heating and general appliance hazards.
HOUSEKEEPING AND STORAGE.	2 lecture hours	Concerns and violations.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 105 Fire Prevention

ELECTRICAL HAZARDS.	2 lecture hours	Fundamentals of electrical hazards: shorts, insulation breakdown, exceeding electrical ratings.
HEATING HAZARDS.	2 lecture hours	Inspection fundamentals.
FLAMMABLE LIQUID STORAGE.	2 lecture hours	Flammable liquids, physical properties, storage procedures, principles of handling,fire prevention standards.
SPECIAL HAZARDS.	2 lecture hours	Transportation, building storage, chemicals, plastics, radioactive materials.
ENFORCEMENT AND SOLUTIONS.	2 lecture hours	Typical problems and case studies.
FIRE INVESTIGATION FUNDAMENTALS.	4 lecture hours	Skills and techniques in relating to the public and gaining compliance with codes.
PUBLIC EDUCATION.	1 lecture hour	Public education techniques used for media; making the public “fire safe”.
CODE AND ORDINANCE ADMINISTRATION.	4 lecture hours	Techniques of applying the California Administrative, Uniform Fire and Uniform Building codes and local ordinances. Obtaining court authority.
MID-TERM AND FINAL EXAMINATIONS.	4 lecture hours.	
	Total hours 48	

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 105, Fire Prevention

WHAT METHODS WILL BE EMPLOYED TO HELP THE STUDENT LEARN?
Lecture, demonstrations, student activities, films, slides, field trips, simulation, tests.

WHAT ACTIVITIES OR ASSIGNMENTS ARE REQUIRED OUTSIDE OF CLASS?
List activities and hours for each. (Must include reading and writing activities.)

Required class hours 3 x 48	= 144
Required classroom hours	= 48
Minimum required outside hours	= 96
Outside activities:	
Class project	= 32 hours
Reading text and writing related essay assignments	= 64 hours

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 105, Fire Prevention

STANDARDS OF ACHIEVEMENT
List graded activities.

Midterm	= 30%
Final	= 30%
Projects	= 25%
Homework assignments and quizzes	= 15%

Class projects consist of term paper plus completed violation notice.

How will student performance be graded? (Point scale or other measurement.)

90% - 100%	= A
80% - 89%	= B
70% - 79%	= C
Below 70%	= F

NAME, NUMBER, TITLE
FUTURE GOAL:
California Fire and Emergency Management Services, 002,
Fitness & Career Progress Assessment
(If name, number or title is being revised, above should reflect the NEW information;)
(AND, the complete former course name MUST be included in the CATALOG ENTRY below.)

* NEW _____; REVISION WITH _____ CATALOG CHANGES

DELETION ____; REVISION WITH _____ CLASS SCHEDULE CHANGES

DIVISION DEAN SIGNATURE _____ DATE

CATALOG ENTRY (60 word limit; underline changes if a revision)
California Fire and Emergency Management Services 002,
Fitness & Career Progress Assessment
Units: .5
Class hours: 8 lecture, 4 laboratory.
Prerequisite: CFEMS 106; 001 and concurrent enrollment in CFEMS Program
Advisory reading level: 4.
A physical fitness and advanced career progress assessment to assist students in reevaluating career choice, documenting progress made toward career goals, developing a progress record of physical fitness, professional development and, and evaluating the job market.
Grade: CR/NCR only. Fall, Spring.

CLASS SCHEDULE ENTRY (368 character limit; underline changes if a revision)
California Fire and Emergency Management Services 002, Fitness & Career Progress Assessment
Units: .5 Class hours: 8 lecture, 4 laboratory.
Prerequisite: CFEMS 102; 001 and concurrent enrollment in CFEMS Program
A physical fitness and advanced career progress assessment to assist students in reevaluating career choice, documenting progress made toward career goals, developing a progress record of physical fitness, professional development and, and evaluating the job market.
Advisory reading level: 4.

If arranged hours are listed in catalog entry above, check one: Course Week
Is this course cross-listed with another course? (Same as) Yes Subject ID. No
Have all departments who offer this course for a degree option, elective or certificate, been advised of the changes? Yes No

Major Code _____; Required _XX_ Elective _____ Method of Instruction 30

Number of times course is repeatable _0_ (Maximum three without prior approval of VCAA)

Classification Code _I_ Transfer Code _1_ Budgetary Unit Code ___

Instructor LHE: Lecture _____ Laboratory ___ SAM Priority Code _C_

Co/Prerequisite Approval Code_____
Co/Prerequisite Courses Required 2
Co/Prerequisite Message (Limit to 10 characters) See Catalog _____ (i.e.: see catalog)

Subject I.D._____ Proposed by _____ Date _____
Advisory Committee Approval Date _____
Division Curr Committee Date _____ Curriculum Council Approval Date _____
Division curriculum Chair/Co-Chair _____ Date _____
(SIGNATURE INDICATES COMMITTEE REVIEW & APPROVAL OF ADVISORY READING LEVEL PER BOARD POLICY)

NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 002,
Fitness & Career Progress Assessment
CURRICULUM COUNCIL APPROVAL DATE _____

CATALOG ENTRY
California Fire and Emergency Management Services 002,
Fitness & Career Progress Assessment
Units: .5
Class hours: 8 lecture, 4 laboratory.
Prerequisite: CFEMS 106; 001 and concurrent enrollment in CFEMS Program
A physical fitness and advanced career progress assessment to assist students in reevaluating career choice, documenting progress made toward career goals, developing a progress record of physical fitness, professional development and, and evaluating the job market.
Advisory reading level: 4.

COURSE PURPOSE
To provide students with information, demonstrations, assessments and directions in evaluating career choice, documenting progress made toward career goals, incorporating the progress record into the resume, job hunting skills, examining opportunities in the job market, identifying Improvement areas and strategies.

How does this course respond to issues of multiculturalism? (e.g., reading, techniques to differing learning styles, specific topics, specific assignments).

COURSE MATERIALS
Required texts and/or materials. (include price and date of publication.)
Instructor handouts.

Recommended readings and/or materials.

Other.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 002, Fitness & Career Progress Assessment

MAJOR SEGMENTS OF COURSE CONTENT, Time Required, and What the Student is Expected to Learn. HOW DO THESE COURSE SEGMENTS REQUIRE CRITICAL THINKING SKILLS, ABILITY TO APPLY "COLLEGE LEVEL" CONCEPTS, VOCABULARY AND LEARNING SKILLS?

CONTENT	LECTURE HOURS	DESCRIPTION
Evaluate, personal characteristics, strengths, weaknesses, personal needs, environmental needs, skills, and abilities.	4 lecture hours.	Student will learn about themselves and personal attributes.
		Student will learn about themselves.
Comparing the job and personal profiles	1 lecture hour	Student recognizes progress and needs.
Record keeping and resume building	2 lecture hours	Student learns record keeping and resume building techniques.
Identification of improvement areas developmental strategies.	1 lecture hour	Student will learn and development of strategies.
Physical exercise, training procedures and participation.	2 laboratory hours.	Physical Exercise to include a gradual warm-up of static stretching, calisthenics, and tower run. - 30 minutes. Cardiovascular conditioning running, aerobics on circuit course training. - 30 minutes A gradual cool down to include static stretching, calisthenics, instructional technique concerning injury prevention, and treatment.
A minimum of two student counseling sessions to review career and professional goals	2 laboratory hours	Develop a written summary of counseling sessions comments
	Total hours 12	

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 002, Fitness & Career Progress Assessment

(If name, number or title is being revised, above should reflect the NEW information)

WHAT METHODS WILL BE EMPLOYED TO HELP THE STUDENT LEARN?
Lectures, demonstrations, reading handouts, practice.

WHAT ACTIVITIES OR ASSIGNMENTS ARE REQUIRED OUTSIDE OF CLASS?
List activities and hours for each. (Must include reading and writing activities.)

Maintain personal records	= 2 hours.
Reading instructor handouts	= 2 hours.
Developing personal resume and personnel assessment	= 4 hours.
Written assignments, develop personal guidelines for improvement with strategies	= 4 hours.

Required class hours 3 x 8	= 24
Class hours 1 x 8	= 8
Laboratory hours	= 4
Outside activities	= 12
Total class hours	= 24

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 002, Fitness & Career Progress Assessment

(If name, number or title is being revised, above should reflect the NEW information)

STANDARDS OF ACHIEVEMENT
List graded activities.

Record keeping	=20%
Resume	=60%
Pre fitness test / post fitness test	=20%

Student will apply proper techniques of stretching to avoid injury before strenuous exercise and run 1.5 miles in 15 or less minutes.

How will student performance be graded? (Point scale or other measurement.)

Student shows improvement between pre and post assessments.
Student's ability to follow rules, regulations and procedures.

80-100%	=Credit
Below 80%	=No Credit

COURSE OUTLINE APPROVAL SHEET
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 008,
Orientation and Physical Fitness

* NEW _____; REVISION WITH _____ CATALOG CHANGES

DELETION _____; REVISION WITH _____ CLASS SCHEDULE CHANGES

DIVISION DEAN SIGNATURE _____ DATE

CATALOG ENTRY (60 word limit; underline changes if a revision)
California Fire and Emergency Management Services, 008,
Orientation and Physical Fitness
Units: 1.
Class hours: 8 lecture, 80-126 laboratory.
Prerequisite: Concurrent enrollment in Academy 060.
Advisory reading level: 4.
An orientation to the Basic Fire Academy; includes introduction to the Basic Academy, rules, regulations, procedures, safety, dress code, and physical fitness training program.
Grade: CR/NCR only. Fall, Spring.

CLASS SCHEDULE ENTRY (368 character limit; underline changes if a revision)
[California Fire and Emergency Management Services, 008, Orientation and Physical Fitness.]
1 Unit.
An orientation to the Basic Fire Academy; includes introduction to the Basic Academy, rules, regulations, procedures, safety, dress code, and physical fitness training program.
Grade: CR/NCR only. Prerequisite: Concurrent enrollment in Academy 060.
Advisory reading level: 4.

If arranged hours are listed in catalog entry above, check one: Course _____ Week _____
Is this course cross-listed with another course?(same as yes subject ID. No
Have all departments who offer this course for a degree option, elective or certificate, been advised of the changes? Yes
No
Major code _____; Required _XX___ Elective _____ Method of Instruction _30

Number of times course is repeatable _0____(maximum three without prior approval of vcaa)
Classification code _I_ transfer code __1_ Budgetary Unit Code _____
Instructor LHE: Lecture ____ Laboratory _____ SAM Priority Code __C_____

Co/Prerequisite Approval Code _____
Co/Prerequisites Courses Required 1
Co/Prerequisite Message (Limit to 10 characters) See catalog _____ (i.e.: See catalog)

Subject I.D._____ Proposed by _____ Date _____
Advisory committee approval date _____
Division Curr Committee Date _____ Curriculum Council Approval Date _____
Division Curriculum Chair/Co/Chair _____ Date _____

(SIGNATURE INDICATES COMMITTEE REVIEW & APPROVAL OF ADVISORY READING LEVEL PER BOARD POLICY)

COURSE OUTLINE
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 008, PLAN OF INSTRUCTION

NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 008, Orientation and Physical Fitness

WHAT METHODS WILL BE EMPLOYED TO HELP THE STUDENT LEARN?
Lectures, demonstrations, reading handouts, practice.

WHAT ACTIVITIES OR ASSIGNMENTS ARE REQUIRED OUTSIDE OF CLASS?
List activities and hours for each. (Must include reading and writing activities.)

Reading Rules and Regulations, Marching Orders, Marching Cadence	= 2 hours
Reading instructor handouts on physical fitness, Review basic firefighter safety procedures	= 4 hours
Summarizing rules and regulations	= 1 hours.
Written assignments, develop personal guidelines for improvement of cardiovascular endurance	= 1 hours

Class hours 1 x 48	= 48
Classroom hours	= 88-134
Outside activities	= 0

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 008, Orientation and Physical Fitness

STANDARDS OF ACHIEVEMENT

List graded activities.

Quizzes; 80% correct standard = 60%

Written assignments = 20%
- Training Heart Rate Formula
- Heart Rate Data Card

Pre fitness test/post fitness test = 20%
- Student will apply proper techniques of stretching to avoid injury before strenuous exercise.

Total hours 88-134

How will student performance be graded? (Point scale or other measurement.)

Student shows improvement between pre and post fitness test.
Student's ability to follow rules, regulations and procedures.

80 - 100% = Credit
Below 80% = No Credit

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 008, Orientation and Physical Fitness

WHAT METHODS WILL BE EMPLOYED TO HELP THE STUDENT LEARN?
Lectures, demonstrations, reading handouts, practice.

WHAT ACTIVITIES OR ASSIGNMENTS ARE REQUIRED OUTSIDE OF CLASS?
List activities and hours for each. (Must include reading and writing activities.)

Reading Rules and Regulations, Marching Orders, Marching Cadence	= 2 hours
Reading instructor handouts on physical fitness, Review basic firefighter safety procedures	= 4 hours
Summarizing rules and regulations	= 1 hours.
Written assignments, develop personal guidelines for improvement of cardiovascular endurance	= 1 hours

Class hours 1 x 48	= 48
Classroom hours	= 88-134
Outside activities	= 0

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 008, Orientation and Physical Fitness

STANDARDS OF ACHIEVEMENT

List graded activities.

Quizzes; 80% correct standard = 60%

Written assignments = 20%
Training Heart Rate Formula
Heart Rate Data Card

Pre fitness test/post fitness test = 20%
Student will apply proper techniques of stretching to avoid injury before strenuous exercise.

How will student performance be graded? (Point scale or other measurement.)

Student shows improvement between pre and post fitness test.
Student's ability to follow rules, regulations and procedures.

80 - 100% = Credit
Below 80% = No Credit

COURSE OUTLINE APPROVAL SHEET
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 106, Physical Fitness for Public Safety Personnel

* NEW _____; REVISION WITH ___ W/O _____ CATALOG CHANGES

DELETION ____; REVISION WITH ___ W/O _____ CLASS SCHEDULE CHANGES

DIVISION DEAN SIGNATURE _____ DATE _____

CATALOG ENTRY (60 word limit; underline changes if a revision)

California Fire and Emergency Management Services, 106
Physical Fitness for Public Safety Personnel
Units: 5.
Class hours: 3 lecture, 20 arranged, 72 independent study.
Prerequisite: None.
Advisory reading level: 4.
A lecture class designed to provide students information on exercise and nutrition. For Public Safety Personnel.

California Fire and Emergency Management Services, 106 Physical Fitness for Public Safety Personnel
5 Units. A lecture class designed to provide students information on exercise and nutrition. For Public Safety Personnel.
Advisory reading level: 4.

If arranged hours are listed in catalog entry above, check one: Course__XX____ Week_____
Is this course cross-listed with another course? (Same as) Yes Subject ID. No
Have all departments who offer this course for a degree option, elective or certificate, been advised of the changes? Yes No

Major Code _____; Required _XX_ Elective _____ Method of Instruction _54_____

Number of times course is repeatable _0_ (Maximum three without prior approval of VCAA)

Classification Code _I_ Transfer Code _2_ Budgetary Unit Code _____

Instructor LHE: Lecture _____ Laboratory ___ SAM Priority Code _C_

Co/Prerequisite Approval Code_____
Co/Prerequisite Courses Required 0
Co/Prerequisite Message (Limit to 10 characters) See Catalog _____ (i.e.: see catalog)

Subject I.D._____ Proposed by _____ Date _____
Advisory Committee Approval Date _____
Division Curr Committee Date _____ Curriculum Council Approval Date _____
Division curriculum Chair/Co-Chair _____ Date _____
(SIGNATURE INDICATES COMMITTEE REVIEW & APPROVAL OF ADVISORY READING LEVEL PER BOARD POLICY)DIVISION

COURSE OUTLINE
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 106, Physical Fitness for Public Safety Personnel

CURRICULUM COUNCIL APPROVAL DATE _____

CATALOG ENTRY
California Fire and Emergency Management Services, 106
Physical Fitness for Public Safety Personnel
Units: 5.
Class hours: 3 lecture, 20 arranged, 72 independent study.
Prerequisite: None.
Advisory reading level: 4.
A lecture class designed to provide students information on exercise and nutrition. For Public Safety Personnel.

COURSE PURPOSE
Each student under supervision will develop an individual physical fitness and nutrition regimen and using self-directed techniques, perform the regimen a minimum of four hours per week. Overall objective will be to achieve a level of physical capability necessary to pass a public safety physical agility assessment and maintain that level of performance.

How does this course respond to issues of multiculturalism? (e.g., reading, techniques for differing learning styles, specific topics, specific assignments).

COURSE MATERIALS
Required texts and/or materials. (include price and date of publication.)
PHYSIOLOGY OF FITNESS, Brian J. Sharkey, Publishers: Human Kinetics, Champagne, Ill. 61820, Latest Ed., $13.95.

NUTRITIONAL HANDOUTS, $5.60.

Recommended reading and/or materials.
CONCEPTS OF PHYSICAL FITNESS WITH LABORATORIES, Corbin & Lindsey, 1988, William C. Brown Publishers.

The Winning Edge. Frank Addleman

Other.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 106, Physical Fitness for Public Safety Personnel

MAJOR SEGMENTS OF COURSE CONTENT, Time Required, and What the Student is Expected to Learn. HOW DOES THIS PLAN OF INSTRUCTION REQUIRE CRITICAL THINKING SKILLS, ABILITY TO APPLY" COLLEGE LEVEL" CONCEPTS, VOCABULARY AND LEARNING SKILLS?
LECTURE:

NEED FOR PHYSICAL FITNESS.	6 lecture hours.	As it relate to public Safety Personnel.
STRESS AND FATIGUE.	2 lecture hours.	Dangers of stress and fatigue.
CARDIO VASCULAR.	4 lecture hours.	Exercise Prescription.
BODY FAT.	2 lecture hours.	Measurement of and relationship to physical performance and health.
EXERCISE TOLERANCE TEST.	2 lecture hours.	The bodies maximal aerobic power. Necessary level for public safety personnel.
NUTRITION AND WEIGHT CONTROL.	16 lecture hours.	You are what you eat: carbohydrates, calories, proteins, fats, vitamins, minerals;Food selection, labels, metabolism weight control, caloric intake/ expenditure. Nutrition and it's relationship to physical performance and health.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 106, Physical Fitness for Public Safety Personnel

NEUROMUSCULAR INTEGRITY.	3 lecture hours.	Fitness, flexibility, strength, power, endurance utilization of oxygen.
CARDIO-RESPIRATORY FUNCTION.	5 lecture hours.	Heart and lung efficiency.
MEDICAL FITNESS.	4 lecture hours.	As presented in NFPA 1001. Standards for public safety personnel.
PROFILE AND PROGRAM DEVELOPMENT.	2 lecture hours.	Individualized fitness assessment and prescription.
FINAL EXAMINATION.	2 lecture hours.	Performance evaluation and final written examination.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 106, Physical Fitness for Public Safety Personnel

DIRECTED STUDY

*COMPETENCY, DIAGNOSTIC AND PLANNING GUIDE.
6 directed study hours.
Learning needs assessment (knows vs. needs to know).

*LEARNING CONTRACT.
4 directed study hours.
Setting goals: regimen, performance levels.

*STUDENT REGIMEN EVALUATION.
2 directed study hours.
Evaluation: stress test, body composition, others.

*ESTABLISHMENT OF RECORDS.
2 directed study hours.
Health records, resume, other records.

*ASSESSMENT OF PERFORMANCE PRACTICE.
4 directed study hours.
Self evaluation on 9, 12 and 16 weeks.

*REGULAR PERFORMANCE (3 HRS./WK.).
54 directed study hours.
Performance discipline.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 106, Physical Fitness for Public Safety Personnel

LABORATORY INSTRUCTION

*REGULAR PERFORMANCE
3 laboratory hours.
Coaching, familiarization, performance.

1 1/2 MILE RUN.
3 laboratory hours.
Value to the firefighter, technique, equipment, proficiency.

PHYSICAL AGILITY.
3 laboratory hours.
Familiarization of standard public safety physical agility:
Review events, techniques, practice, evaluation, re-evaluation.

PERFORMANCE EVALUATION.
3 laboratory hours.
Resting EKG, flexibility tests, pulmonary, body composition, strength, muscular endurance, aerobic capacity, optional blood test.

TESTING.
8 laboratory hours.

*Directed study folder

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 106, Physical Fitness for Public Safety Personnel

WHAT METHODS WILL BE EMPLOYED TO HELP THE STUDENT LEARN?
Books, films, profile charts, guest speakers, handouts, fitness assessment tests, demonstrations, lectures, tests, hands-on experience, self directed learning techniques.

WHAT ACTIVITIES OR ASSIGNMENTS ARE REQUIRED OUTSIDE OF CLASS?
List activities and hours for each. (Must include reading and writing activities.)

Required class hours 5 x 48	= 240
Required classroom hours	= 51
Minimum required outside hours	= 193
Outside activities:	
Directed study: Fitness plan and execution 4 hours per week	= 68 hours
(fitness assignment 1-10 (directed study folder)	= 27 hours
Fitness lab:	= 8 hours
Mock physical agility:	= 16 hours
Nutritional analysis:	= 8 hours
Article review:	= 8 hours
Reading:	= 68 hours

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 106, Physical Fitness for Public Safety Personnel

STANDARDS OF ACHIEVEMENT
List graded activities.

Directed study folder, fitness contract and fitness lab	= 40%
Article review	= 20%
Homework	= 10%
Tests/Quizzes	= 20%
Nutrition	= 20%

Student will implement principals of physical fitness nutrition learned in lecture/reading to develop, follow and monitor his fitness development. Lifestyle change that promote better health such as exercise and good nutrition are emphasized.

How will student performance be graded? (Point scale or other measurement.)

90 - 100%	= A
80 - 89%	= B
70 - 79%	= C
Below 70%	= F

COURSE OUTLINE APPROVAL SHEET
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 107, Personal Fire Safety

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* NEW ___X_____; REVISION WITH _____ CATALOG CHANGES
DELETION _____; REVISION WITH _____ CLASS SCHEDULE CHANGES
DIVISION DEAN SIGNATURE _____ DATE _____

CATALOG ENTRY (60 word limit; underline changes if a revision)
California Fire and Emergency Management Services, 107,
Fundamentals of Personal Fire Safety
Units: 3 Class hours: 3 lecture.
Prerequisite: None.
Advisory reading level: 4.
Provides career directed students, with legal and operational perspectives of worker-employer relationships and functions. Demonstrations on current techniques in the prevention of injuries and promotion of safety while conducting routine and emergency fire operations.

CLASS SCHEDULE ENTRY (368 character limit; underline changes if a revision) [California Fire and Emergency Management Services, 107, Fundamentals of Personal Fire Safety.] 3 Units. Provides career directed students, with legal and operational perspectives of worker-employer relationships and functions. Demonstrations on current techniques in the prevention of injuries and promotion of safety while conducting routine and emergency public safety operations. Advisory reading level: 4.

If arranged hours are listed in catalog entry above, check one: Course_____ Week_____
If "same as" course is listed above, type "same as" Course Subject I.D.:_____
Is this course cross-listed with another course? (Same as) Yes Subject ID. No
Have all departments who offer this course for a degree option, elective or certificate, been advised of the changes? Yes No

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Major Code _____; Required _____ Elective _____ Method of Instruction _10_____

Number of times course is repeatable _0_ (Maximum three without prior approval of VCAA)

Classification Code _I_ Transfer Code _2_ Budgetary Unit Code _____

Instructor LHE: Lecture _____ Laboratory ___ SAM Priority Code _C_

Co/Prerequisite Approval Code_____
Co/Prerequisite Courses Required 0
Co/Prerequisite Message (Limit to 10 characters) See Catalog _____ (i.e.: see catalog)

Subject I.D._____ Proposed by _____ Date _____
Advisory Committee Approval Date _____
Division Curr Committee Date _____ Curriculum Council Approval Date _____
Division curriculum Chair/Co-Chair _____ Date _____
(SIGNATURE INDICATES COMMITTEE REVIEW & APPROVAL OF ADVISORY READING LEVEL PER BOARD POLICY)

COURSE OUTLINE
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 107, Personal Fire Safety

CATALOG ENTRY
California Fire and Emergency Management Services, 107,
Fundamentals of Personal Fire Safety
Units: 3.
Class hours: 3 lecture.
Prerequisite: None.
Advisory reading level: 4.
Provides career directed students, with legal and operational perspectives of worker-employer relationships and functions. Demonstrations on current techniques in the prevention of injuries and promotion of safety while conducting routine and emergency fire operations.

COURSE PURPOSE
Provides career directed students, with legal and operational perspectives of worker-employer relationships and functions. Training to reduce the probability of injury during routine and emergency operations, to recognize and utilize basic first aid fire fighting appliances, to select, maintain and test home fire detection devices to acquaint students with knowledge of safety equipment and limitations, including firefighter turnouts, breathing apparatus, gloves, and helmets.

How does this course respond to issues of multiculturalism? (e.g., reading, techniques for differing learning styles, specific topics, specific assignments).

COURSE MATERIALS
Required texts and/or materials. (include price and date of publication.)
IFSTA 209, FIREFIGHTER OCCUPATIONAL SAFETY, 2nd Edition, 1991, $27.70
NFPA, FIRE PROTECTION HANDBOOK, 17th Edition, 1991, $118.15.

Recommended reading and/or materials.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 107, Personal Fire Safety

MAJOR SEGMENTS OF COURSE CONTENT, Time Required, and What the Student is Expected to Learn. HOW DOES THIS PLAN OF INSTRUCTION REQUIRE CRITICAL THINKING SKILLS, ABILITY TO APPLY "COLLEGE LEVEL" CONCEPTS, VOCABULARY AND LEARNING SKILLS.
Research and analyze elements of a safety program. Discuss and justify purpose, and responsibilities, the employee, employer and supervisor have to that program.

DEATH & INJURY CAUSES/ ACCIDENT CONTROL CONCEPTS.	4 lecture hours.	Recognize causes of injuries and fatal accidents, requirements of safety program; prevention of firefighter deaths and injuries.
LAWS AND REGULATIONS.	3 lecture hours.	Federal, state and local legislation; overview of regulations and enforcement agencies.
DUTIES AND RESPONSIBILITIES.	3 lecture hours.	Employee/employer duties and mutual responsibilities in safety on the job.
SAFE USE OF FACILITIES, POWER & HAND TOOLS.	3 lecture hours.	Recognize safe working environment, unsafe acts (or conditions)when using hand and power tools.
PROTECTIVE CLOTHING AND EQUIPMENT.	3 lecture hours.	Recognize different types of protective equipment used in emergency incidents.
BURN INJURY AND TREATMENT.	3 lecture hours.	Degrees of burns, first aid care, protection of clothing burns.
TRAINING SAFETY.	3 lecture hours.	Safety hazards in training, student obligations.
ENROLLEE HAZARDS/CODE THREE DRIVING.	3 lecture hours.	Special involved in responding toemergency site
THE EMERGENCY SCENE.	3 lecture hours.	Basic safety hazards at emergency scene.
SPECIAL HAZARDS.	8 lecture hours.	Types of hazards, basic recognition of: D.O.T. electrical, radioactive, PCB, and trash/dumpster hazards, with special emphasis toward hazardous materials incidents.

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 107, Personal Fire Safety

INSPECTION SAFETY.	3 lecture hours.	Safety during routine inspections.
HEALTH AND PSYCHOLOGICAL CONSIDERATIONS.	3 lecture hours.	Health and psychological needs of emergency responders.
WILDLAND FIRE CONTROL SAFETY.	3 lecture hours.	Safety hazards relating to Wildland fire control.
HOME FIRE DETECTION DEVICES AND FIRST AID FIRE FIGHTING APPLIANCES.	3 lecture hours.	The various devices and appliances available and the proper uses for each.
	Total hours 48	

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 107, Personal Fire Safety

WHAT METHODS WILL BE EMPLOYED TO HELP THE STUDENT LEARN?

Lecture
Slide
Overheads
Work Books - Student group activities
Videos - From NFA Course on F/F Safety
Quizzes weekly
Term Project

WHAT ACTIVITIES OR ASSIGNMENTS ARE REQUIRED OUTSIDE OF CLASS?

List activities and hours for each. (Must include reading and writing activities.)

Required class hours 3 units x 48 = 144
Required classroom = 48
Minimum required outside activities = 96
Outside activities:

16 hours - Reading from NFPA handbook (1 hour per week)
16 hours - Reading from Instructor handouts (1 hour per week)
64 hours - Research and class project (4 hours per week)

Term Projects—Minimum 10 pages double spaced.
Articles from news re: firefighting

PLAN OF INSTRUCTION
NAME, NUMBER, TITLE

California Fire and Emergency Management Services, 107, Personal Fire Safety

STANDARDS OF ACHIEVEMENT
List graded activities.

Quizzes 10 x 15 points each =	150 points
Midterm =	100 points
Final =	200 points
Projects Term paper and oral presentations =	50 points
Total points =	500 points

How will student performance be graded? (Point scale or other measurement.)

Quizzes	= 30%
Midterm	= 20%
Final	= 40%
Projects	= 10%

Students will be graded on a standard grading scale as follows:

450 points or higher	= A
400 points to 449 points	= B
350 points to 399 points	= C
Below 350 points	= F

CHAPTER 11
APPENDIX A
PROFESSIONAL, MULTICULTURAL & ETHICAL ISSUES

Nobody asked me, but . . .

"Nobody asked me, but . . ." is an article written by a retired U.S. Navy Captain, and defines the term Professionalism rather well. The other points it contains are also relevant to the Fire Service. With few changes the same article could have been about the Fire Service.

Captain R. A. Stratton, U.S. Navy (Retired)

Where's our code of ethics?

There are six elements that mark a true profession: selective membership, specialized training and education, accountability for the consequences of one's actions, total dedication to the client's welfare over the professional's, and general recognition and acceptance of a professional status and a code of ethics. A naval officer is certainly a professional —but where is his code of ethics?

Arguments have waxed and waned on the need for a formalized code of ethics for the naval officer. During more than 30 years of military service, I have followed these arguments with amazement, amusement, and bemusement. For I believe we have always had a code of ethics, as surely as the British have an unwritten constitution. This code has served us well when we have enforced it, through peer pressure, fitness reports, and, as a last resort, the law. When courage fails us individually or institutionally, and we do not enforce it, the code fails to meet our expectations.

If we need our code of ethics carved in stone, or in the form of a single, codified document, we need a warrior poet to do it. (Beltway bandits, MBAs, lawyers, and theologians need not apply.)

We are a people with a rich naval tradition and history of war at sea. We already have the basic elements of our code in the naval oath and commission, the military Code of Conduct, the Code of Ethics for Government Service, the Secretary of the Navy's (SecNav) Standards of Conduct, and the Navy Military Personnel Manual.

Under our oath we swear allegiance of our own free will to our country and flag, and to support its constitution — not to support a service, a political party, or an administration. We swear that we will faithfully do our job and do it well.

We are granted a commission with the presumption that we will be competent and exhibit valor. We are charged to obey orders and to perform all manner of things thereunto pertaining.

The Code of Conduct declares that we must be prepared to give our lives, that we keep trying no matter what the odds, that we are responsible for the consequences of our actions, and that we are people of faith - in both God and country.

The Code of Ethics for Government Service states that we will be just and scrupulously fair in all our dealings. SecNav goes even further by saying that we will not even give the appearance of any wrongdoing.

The Navy Military Personnel Manual states our work ethic: "Members on active duty are in a 24-hour duty status,

and their military duties shall at all times take precedence on their time, talents, and attention."

How much more in writing do we need? When I received the one-page word processing notification of my mandatory termination of service, it included 91 pages of instructions telling me how to be a moral person in retirement. Then I h to certify by return mail within 60 days that I had both read and thoroughly examined the packet. Issues of special trus and confidence aside, I do not consider myself a more moral person after that little exercise; in fact, I feel a bit degrade But, I realize the intent of the package was to send a caring rocks-and-shoals alert, based on unfortunate past incidents.

I now know what Secretary of State George Shultz felt like when he faced the prospect of a lie detector test. I too wou take the test, and then leave right along with him. I also shared Secretary of the Navy John Lehman's anger over the Walker plea bargain. We may not have all the facts to understand the case, but those lawyers also do not understand th meaning of good order and discipline.

Why do we not have the courage to educate or eliminate those who fail to meet the professional standards? Mass punishment of the innocent is not a very effective leadership technique. Aren't you tired of waiting at the post exchang while the clerk matches your check against ten pages of check-bouncers? Do you feel proud to give your urine sample Aren't you tired of filling out an SF-171 to cash a check at the commissary? Why do the crooks still have ID cards tha grant them privileges they have earlier abused? Why do fat officers get to stay in, and fat enlisted get thrown out? Whatever happened to "Looks fat, is fat?" How many times have selection boards separated people for less than stand performance?

It's more than the trivial, day-to-day things. A former Secretary of Defense testified under oath recently that he knew i early 1966 we could not win the Vietnam War. He sent me to fight in that war in October 1966,k and I did not return u March 1973. How many of our policy makers resigned over the total mismanagement of that war? It was the right wa the right place, at the right time, fought in the wrong way — so wrong that it was even obvious to me, a commander on flight deck, on Yankee Station. The only way to mold moral people is to stand up ourselves and be counted for what w believe in, and to have the courage to hold ourselves and others accountable.

Pray, save my sons from one more manual. We cannot legislate morality. Ethics do not lend themselves to print like ordinance instructions or training manuals. We already have the standards— in our tradition and our professional documents, and we teach morality by personal work and example. We need a poet to put what already exists into language that grabs us by the stacking swivel — and to make it no longer than the Ten Commandments.

Isn't there a warrior poet in the wardroom?

Proceedings; December 1986

A VIEW OF PROFESSIONALISM

Presently, the word professional means different things to different people and groups. This is an indication of how modern person perceives that life has grown more complex. Perhaps a more general definition can be agreed upon and still not take away from any of these other meanings.

The concern of this curriculum is to stress professionalism from the view point of those being served. This can be achieved by examining base priorities, common to most citizens in most communities, God or religion, family, country, etc. No matter how we individually prioritize these base components, honor, ethics and integrity are expected by those being served. It is at this level that the foundations that apply to professionalism are established. Like the other components, we are not born knowing about them.

There are few if any references to the terms; professionalism, patriotism, ethics, honor, integrity, nepotism, favoritism, badges or dress uniforms in any of the curriculums that were reviewed in formulating this project. There is objection by some, to include these topics in the educational plan because (1) they are not relevant to education, (2) they are out of date and no longer apply, (3) they are politically incorrect, or (4) all of the above.

For example, professionalism and like terms are the link to another politically incorrect term, tradition. Tradition long thought to be detrimental in nature, because it fostered the ongoing practice of bad or old fashioned habits. Like most things there are good and bad old fashioned habits. It is wise to separate the two and keep the good habits where possible. Tradition is the history of the fire service. History is the record of what has transpired before, it is studied to determine what works and what doesn't. For example, when tradition was assailed for all of the problems that faced the fire service at the time, all of tradition was assailed, not just the bad parts. Consequently the good was lost with the bad.

Later, the practice of employers buying dress uniforms for the members of the Fire Service was discontinued for cost savings. This led to not wearing the dress uniforms, and eventually the symbol of the dress uniform has been all but forgotten. These two things, tradition and dress uniforms although seemingly minor in nature, and distant from each other in terms of relationship, have profoundly changed the face of the fire service. Uniforms are a demonstration of tradition and an expression of pride.

Professionalism, patriotism, ethics, honor, integrity, nepotism, favoritism, badges and dress uniforms, all are profoundly related to the expectations of those being served and the tradition and pride of those performing the service.
These topics should be a part of any good curriculum and should be demonstrated in practice as well as taught as a topic in a syllabus.

PROFESSIONALISM

Is Firefighting a profession?

A profession is defined as an occupation or vocation requiring advanced study in a specialized field.

Is a Firefighter a professional?

A professional is one who is engaged in a profession**.**

Professionalism is professional status, methods, character, and standards.

The process and activities related to California Fire and Emergency Management Services requires professionalism. The inter-action and dependence between individuals, departments, agencies, enterprise, industry, state and national regions demand professionalism.

The direction from the Wingspread Conferences was to establish professional status for the fire service. The objective of professionalization is to promote fire and life safety through interaction with other professions such

as designers, builders, managers, administrators, engineers and architects. The foundation of professional status is education and training.

The goal of California Fire and Emergency Management Services Training and Education is Professionalism.

The public expects and depends upon professional quality judgments and performance.

HONOR AND INTEGRITY
The tone for Fire and Emergency Management Services Training and Education is, and should be, one of professionalism, with dedicated adherence to honor, integrity, law, policies, rules, regulations, and traditions of the Fire and Emergency Management Services. In the hiring and promotional processes, a requirement for one is a requirement for all without exception.

Honor and integrity are demonstrated by doing what needs to be done. Candidates must be capable of accurately assessing and analyzing, budgets, personnel demands, and resource requirements. These assessments occur in a variety of fields and conditions, such as fire, earthquake, flood, HAZ mats, emergency medicine, and other conditions. These assessments must be presented articulately, in both verbal and written formats for administrative and public consumption. These and other related skills must be on a level equal to other professional counterparts.

NEPOTISM
Nepotism is not, in itself, an evil thing. When the standards are maintained and no preferential treatment is given or otherwise obtained, the hiring of relatives can be a rewarding experience. However in the context that nepotism does not require candidates to meet the same criteria as others entering the profession, it is one of the worst enemies of professionalism. Those who aspire to leadership in the California Fire and Emergency Management Services, must learn the legal and social connotations of nepotism.

It is no wonder then that we are so proud of relatives, or friends when they choose to follow the path of similar careers. Professionalism must not be compromised but rather precautions taken to assure that standards be met, properly, orderly and with honor. Leaders are not born with an understanding of precautions to be taken rather they must be learned and practiced in the work environment.

Perhaps a greater affront to professionalism, is when nepotism is imposed upon the craft from outside, by politicians, administrators, or others of high rank or esteem who seek jobs for friends or relatives without considering the true requirements of the career. Professionalism is the defense for this imposition.

Professionalism brings to mind responsibility, dedication, integrity and honor. Those entering a profession must be educated in accepted professional conduct and practice it accordingly during training and subsequent levels of career growth.

Should a profession relax the standards for just one person, such an act destroys the integrity of the system, and the honor of the profession. The relaxation of standards for any reason is to be avoided.

FAVORITISM
Favoritism exists in many different forms. Perhaps the most damaging forms of favoritism affecting the Professional Fire and Emergency Management Services are those occasions when hiring practices are directed by legal or political decision to hire the less qualified. Some agencies are under such “consent decrees” and as such are required to utilize this type of hiring practice.

Often through no fault of their own, these departments are required to spend massive amounts of tax dollars to hire and train candidates who are on the payroll. This is especially grievous when pools of qualified candidates already exist. Candidates and employers must be made aware of the legal and social criteria. The proper code of conduct to be followed in such cases must be consistent with the ethics of the profession.

Recognizing the importance of meeting the intent of Equal Employment Opportunity legislation, the California Fire and Emergency Management Services Standardized Degree Program provides valuable and viable solutions.

DRESS UNIFORMS AND BADGES
Dress uniforms and badges are the symbols of the professionalism of the Fire Service. They allow the wearer to demonstrate pride in the profession and in the service that he or she performs. Persons entering the training program to become firefighters must know that wearing the uniform may or may not be required, rather it is an honor to be utilized at every opportunity.

MULTICULTURAL ISSUES WITHIN PUBLIC SAFETY

Members of public safety services have a need to understand and respect a multitude of groups that comprise the California population. The course Multicultural Issues Within Public Safety is presented to meet this learning need.

INTENT

The course is designed to be taught as a part of Social Sciences' curriculum and not as a part of the California Standardized Fire Service Professional Development Curriculum.

The course is required as a prerequisite course to the second semester courses in the California Standardized Fire Service Professional Development Curriculum.

PURPOSE OF THE COURSE

The purpose of this course is to present students with a perspective of major cultural groups in California that transcends the views commonly found in society. The course begins by addressing theoretical issues such as culture, ethnicity, race, prejudice, and ethnocentrism, and will use those concepts with others to compare the many groups that comprise California's population.

In order to cover the multitude of groups that public safety professionals need to understand, this will be a comprehensive overview of racial, ethnic, and cultural groups, including gays and lesbians, teenagers, senior citizens, men and women as they constitute cultures unto themselves. In addition, victimology will be addressed, particularly as it affects people on the basis of their cultural identity. Diverse groups do not exist in isolation, so they will be studied in an integrative and comparative manner, that is, in the larger context of California society.

Chapter 12
Appendix B

Current Degree and Certificate Requirements at Selected California Colleges and Universities

STANDARDS EXSITING & PROPOSED	FRESNO CITY COLLEGE	MISSION COLLEGE	MT. SAN ANTONIO COLLEGE	RANCHO SANTIAGO COLLEGE	SHASTA COLLEGE
1001 Entry Level Firefighter	CERT. 43 UNITS BFA 24 U 732 HRS	AA/AS DEGREE. 41 UNITS BFA 252 HRS	AA/CERT. 18 + 12	AA DEGREE CERT. 512 HOURS	CERT. 12 U
1001 Firefighter II				SPECIAL TOPICS	CERT. OJT + 7U
1002 Driver Operator					
1003 Airport Firefighter					
1021 Chief Officer				TOPICS	
1031 Fire Inspector	SPECIAL LEVEL 1	CERT. A,B,C 36 HOURS	AA/CERT. 18 + 16	AA DEGREE	
1033 Fire Investigator	BASIC COURSE	CERT A,B 36 HOURS			
1035 Fire & Life Safety Educator		CERT. 36 HOURS	AA/CERT. 17.5 + 6	AA DEGREE	
1041 Fire Service Instructor	SPECIAL	CERT. 1A,1B, 36 HOURS	AA/CERT. 18 + 15	AA DEGREE	
EMS	EMT 1	CERT 126 HOURS EMT-1		AA DEGREE	
Admin. Asst.-Fire Admin.			AA CERT. 17.5 + 6	AA DEGREE	
FIRE SECRETARY					
Admin. Asst.-Law			AA/CERT 17.5 + 7		
Haz Mats		SPECIAL		AA DEGREE	

Current Degree and Certificate Requirements at Selected California Colleges and Universities

STANDARDS EXISTING & PROPOSED	FRESNO CITY COLLEGE	MISSION COLLEGE	MT. SAN ANTONIO COLLEGE	RANCHO SANTIAGO COLLEGE	**SHASTA COLLEGE**
Rescue		SPECIALIZATION		SPCL TOPICS	
Fire Dispatcher	CERT. 10.5 + 6 U + 8U FF.1 V CERT.	SPECIALIZATION 36 HOURS		SPCL TOPICS	
Volunteer Fire fighter				SPCL TOPICS	
Wildland Fire Control		SPECIALIZATION 81 HOURS		SPCL TOPICS	CERT. 2 U
Oil Fire Control				SPCL TOPICS	
Private Sector Fire Fighter		SPECIALIZATION 72 HOURS	AA/CERT. 18 + 12	SPCL TOPICS	
GENERAL		HEAVY RESCUE	AA/CERT. 18 + 6 U		

Current Degree and Certificate Requirements at Selected California Colleges and Universities

STANDARDS EXSITING & PROPOSED	STATE FIRE MARSHAL'S OFFICE	CALIFORNIA JOIN APPRENTICES HIP PROGRAM	CALIFORNIA STATE UNIVERSITY LOS ANGELES	CALIFORNIA STATE UNIVERSITY SACRAMENTO
1001 Entry Level Firefighter	X	X		
1001 Firefighter II	X	X		
1002 Driver Operator	X	X		
1003 Airport Firefighter				
1021 Fire Officer	X	X	X	X
1021 Chief Officer	X	X	X	X
1031 Fire Inspector	X	X		
1033 Fire Investigator	X	X		
1035 Fire & Life Safety Educator	X	X		
1041 Fire Service Instructor	X	X		
EMS	X	X		
Admin. Asst.-Fire Admin.	X	X		
FIRE SECRETARY	X	X		
Admin. Asst.-Law	X	X		
Haz Mats	X	X		
Rescue	X	X		
Fire Dispatcher	X	X		
Volunteer Firefighter	X	X		
Wildland Fire Control	X	X		
Oil Fire Control	X	X		
Private Sector Fire Fighter	X	X		

CHAPTER 13

APPENDIX C
STANDARDS AND EDUCATIONAL REQUIREMENTS

COMPARISON OF STANDARDS WITH MODEL DEGREE AND CERTIFICATE

STANDARDS	AA/AS DEGREES	CERTIFICATES	BACHELORS DEGREES	MASTERS DEGREES	DOCTORATE DEGREES
1001 Entry Level Fire Fighter	Fire Fighter I				
1001 Fire Fighter II		Fire Fighter II			
1002 Driver Operator		Fire Service Driver Operator Specialist			
1003 Airport Fire Fighter		Aircraft Fire and Rescue Specialist			
Private Sector Fire Fighter		Private Sector Fire Fighter Specialist			
Wildland Fire Control		Wildland Fire Fighter Specialist			
Oil Fire Control		Flammable Liquids Specialist			
Volunteer Fire Fighter		Volunteer Fire Fighter Specialist			

COMPARISON OF STANDARDS WITH MODEL DEGREE AND CERTIFICATE

STANDARDS	AA/AS DEGREES	CERTIFICATES	BACHELORS DEGREES	MASTERS DEGREES	DOCTORATE DEGREES
1021 Fire Officer	Fire Officer Level I		Fire Officer Level II		
	Aircraft Fire Rescue Officer		Fire Officer Level II		
	Volunteer Fire Officer		Fire Officer Level II		
	Wildland Fire Control Officer		Fire Officer Level II		
	Volunteer Fire Officer		Fire Officer Level II		

COMPARISON OF STANDARDS WITH MODEL DEGREE AND CERTIFICATE

STANDARDS	AA/AS DEGREES	CERTIFICATES	BACHELORS DEGREES	MASTERS DEGREES	DOCTORATE DEGREES
1021 Fire Chief	Fire Officer		Fire Officer Level II	Chief Officer	DPA Public Administration
1021 Chief Officer	Fire Officer		Fire Officer Level II	Chief Officer	DPA Public Administration
1031 Fire Inspector	Fire Prevention Officer		Fire Officer Level II	Chief Officer	DPA Public Administration
1033 Fire Investigator	Fire Investigation Officer		Fire Officer Level II	Chief Officer	DPA Public Administration
1035 Fire & Life Safety Educator	Fire Safety Officer		Fire Officer Level II	Chief Officer	DPA Public Administration
1041 Fire Service Instructor	Fire Service Training Officer		Fire Officer Level II	Chief Officer	DPA Public Administration
EMS	Emergency Medical Officer		Fire Officer Level II	Chief Officer	DPA Public Administration

COMPARISON OF PROPOSED STANDARDS WITH MODEL DEGREE AND CERTIFICATE

STANDARDS	AA/AS DEGREES	CERTIFICATES	BACHELORS DEGREES	MASTERS DEGREES	DOCTORATE DEGREES
Admin. Asst. Fire Admin.	Administrative Asst. Executive Level		Fire Officer Level II	Chief Officer	
Fire Secretary	Fire Secretary				
Admin. Asst. Law	Administrative Asst. Legal				
Haz Mat	Fire Service Hazardous Mat Officer		Fire Officer Level II	Chief Officer	DPA Public Admin & alternate majors.
Rescue	Fire Service Rescue Officer		Fire Officer Level II	Chief Officer	
Fire Dispatcher	Communications Officer		Fire Officer Level II	Chief Officer	
Communications Manager			Fire Officer Level II	Chief Officer	DPA Public Admin. & alternate majors.

CHAPTER 14
APPENDIX D
COMPARISON OF COLLEGE CORE OFFERINGS

	INTRO	FIRE BEHAVIOR & COMBUSTION	PERSONAL FIRE SAFETY	FIRE PREVENT.	BUILDING CONST.	EQUIP AND SYSTEMS	PHYSICAL FITNESS
AMERICAN RIVER	X	X		X	X	X	X
BAKERSFIELD	X	X	X	X		X	
CRAFTON HILLS	X	X		X	X	X	X
FRESNO	X	X	X	X	X	X	
MISSION COLLEGE	X	X		X	X	X	X
MT. SAN ANTONIO	X	X		X	X	X	X
RANCHO SANTIAGO	X	X	X	X	X	X	X
SHASTA	X	X	X*	X	X	X	

CHAPTER 15
APPENDIX E
NEW AND REVISED COURSES

REVISED
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES
CORE COURSES

Course	Course Number	Units	Hours (Min.)		
			In	Out	Tot
Fire Protection Organization	101	3	48	96	144
Fire Behavior & Combustion	102	3	48	96	144
Fire Protection Equipment & Systems	103	3	48	96	144
Building Construction for Fire Protection	104	3	48	96	144
Fire Prevention	105	3	48	96	144
Total	5	15	240	480	720

NEW & REVISED
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES
NON-CORE COURSES, HOURS AND UNITS

COURSE	COURSE NUMBER	UNITS	HOURS (MIN) CLASS ROOM	HOURS MINIMUM OUTSIDE CLASSROOM	INDEPENDENT STUDY	TOTAL HOURS
PHYSICAL FITNESS FOR PUBLIC SAFETY PERSONNEL	106	5	51	193	203	447
PERSONAL FIRE SAFETY	107	3	48	96	0	144
FITNESS AND CAREER PROGRESS ASSESSMENT	001	.5	8	16	0	24
FITNESS AND CAREER PROGRESS ASSESSMENT	002	.5	8	16	0	24
FIREFIGHTER I PHYSICAL ABILITY DEMONSTRATION	007	.1	8	0	0	8
BASIC ACADEMY ORIENTATION AND PHYSICAL FITNESS	008	1	88-126	0	0	88
BASIC FIRE ACADEMY	060	8	436	220	0	656
EMERGENCY MEDICAL TECHNICIAN TRAINING	100	6	77	51		128
TOTAL		24.1	451	801	203	1455

NEW & REVISED
CALIFORNIA FIRE AND EMERGENCY MANAGEMENT SERVICES COURSES; HOURS AND UNITS

COURSE	COURSE NUMBER	UNITS	HOURS (MIN) CLASS ROOM	HOURS MINIMUM OUTSIDE CLASSROOM	INDEPENDENT STUDY	TOTAL HOURS
FIREFIGHTER I PHYSICAL ABILITY DEMONSTRATION	007	.1	4	4		8
ORIENTATION AND PHYSICAL FITNESS	008	1	8	80		88
BASIC ACADEMY	006	8	436	220		656
EMERGENCY MEDICAL TECHNICIAN TRAINING	100	6	77	51		128
MULTICULTURAL ISSUES WITHIN PUBLIC SAFETY	*	3	48	96	0	144
TOTAL	4	15.1	521	355		880

* A prerequisite Social Sciences course, common to all four public safety disciplines.

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APPENDIX F
FUTURE AA/AS DEGREE CONSIDERATIONS

SAMPLE DEGREE MATRIX
RECOMMENDED REVISION PROJECTS FOR PHASE II

STANDARDS	AA/AS DEGREES	CERTIFICATES	BACHELORS DEGREES	MASTERS DEGREES	DOCTORATE DEGREES
1001 Entry Level Fire Fighter	Fire Fighter I				
1001 Fire Fighter II		Fire Fighter II			
1002 Driver Operator		Fire Service Driver Operator Specialist			
1003 Airport Fire Fighter		Aircraft Fire and Rescue Specialist			
Private Sector Fire Fighter		Private Sector Fire Fighter Specialist			
Wildland Fire Control		Wildland Fire Fighter Specialist			
Oil Fire Control		Flammable Liquids Specialist			
Volunteer Fire Fighter		Volunteer Fire Fighter Specialist			

Public Administration is the most logical choice for immediate development. Development of alternate majors is necessary to prevent in-growth and to promote alternate educational paths. Regardless of the major, certification requirements must be meet.

SAMPLE DEGREE MATRIX
RECOMMENDED REVISION PROJECTS FOR PHASE II

STANDARDS	AA/AS DEGREES	CERTIFICATES	BACHELORS DEGREES	MASTERS DEGREES	DOCTORATE DEGREES
Fire Protection Engineering	**AS**		**BS**	**MS**	**DE**
1021 Fire Officer	Fire Officer Level I		Fire Officer Level II	Public Admin.	
	Aircraft Fire Rescue Officer		Fire Officer Level II	Public Admin.	
	Volunteer Fire Officer		Fire Officer Level II	Public Admin.	
	Wildland Fire Control Officer		Fire Officer Level II	Public Admin.	
	Volunteer Fire Officer		Fire Officer Level II	Public Admin.	
1021 Chief Officer	Fire Officer Level I		Fire Officer Level II	Public Admin.	
1021 Fire Chief	Fire Officer Level I		Fire Officer Level II	Public Admin.	DPA

SAMPLE DEGREE MATRIX
RECOMMENDED REVISION PROJECTS FOR PHASE II

STANDARDS	AA/AS DEGREES	CERTIFICATES	BACHELORS DEGREES	MASTERS DEGREES	DOCTORATE DEGREES
1031 Fire Inspector	Fire Prevention Officer I		Fire Officer Level II	Public Admin.	DPA Public Administration
1033 Fire Investigator	Fire Investigation Officer I		Fire Officer Level II	Public Admin.	DPA Public Administration
1035 Fire & Life Safety Educator	Fire Safety Officer Level I		Fire Officer Level II	Public Admin.	DPA Public Administration
1041 Fire Service Instructor	Fire Service Training Officer Level I		Fire Officer Level II	Public Admin.	DPA Public Administration

SAMPLE DEGREE MATRIX
RECOMMENDED REVISION PROJECTS FOR PHASE II

STANDARDS	AA/AS DEGREES	CERTIFICATES	BACHELORS DEGREES	MASTERS DEGREES	DOCTORATE DEGREES
EMS	Emergency Medical Officer Level I		Fire Officer Level II	Public Admin.	Public Admin.
Haz Mats	Fire Services Hazardous Mat Officer Level I		Fire Officer Level II	Public Admin.	Public Admin
Rescue	Fire Service Rescue Officer Level I		Fire Officer Level II	Public Admin.	
Fire Dispatcher	Communications Officer Level I		Fire Officer Level II	Public Admin.	
Communications Manager	Communications Officer Level I		Fire Officer Level II	Public Admin.	Public Admin.
Admin. Asst. Fire Admin.	Administrative Asst. Executive Level	Undetermined			
Fire Secretary	Fire Secretary				
Admin. Asst. Law	Administrative Asst. Legal				

CHAPTER 17
APPENDIX G
DEGREE OPTIONS

California Fire and Emergency Management Services
Certificate and Degree Options Model

CERTIFICATES	**AA/AS DEGREES** FIRE FIGHTER **LEVEL I OFFICER**	**BA/BS DEGREES** **LEVEL II** **FIRE OFFICER**	**MASTERS** **DEGREES** **CHIEF OFFICER** **FIRE CHIEF**	**DR.** **Ph.D.** **DEGREES** **FIRE CHIEF**
	FIRE FIGHTER I	FIRE OFFICER I		
	FIRE OFFICER	CHIEF OFFICER		
			CHIEF OFFICER MPA	
			FIRE CHIEF MPA	
			FIRE CHIEF MPA	FIRE CHIEF DPA
FIRE PROTECTION ENGINEERING	FIRE PROTECTION ENGINEERING AS	FIRE PROTECTION ENGINEERING BS	FIRE PROTECTION ENGINEERING ME	FIRE PROTECTION ENGINEERING DE
	FIRE INSPECTOR	FIRE PREVENTION OFFICER	FIRE MARSHAL MPA	
	FIRE INVESTIGATOR	ARSON INVESTIGATOR	CHIEF INVESTIGATOR MPA	

California Fire and Emergency Management Services
Certificate and Degree Options Model

CERTIFICATES	AA/AS DEGREES FIRE FIGHTER LEVEL I OFFICER	BA/BS DEGREES LEVEL II FIRE OFFICER	MASTERS DEGREES CHIEF OFFICER FIRE CHIEF	DR. Ph.D. DEGREES FIRE CHIEF
EMERGENCY MEDICAL TECHNICIAN	EMERGENCY MEDICAL OFFICER	EMERGENCY MEDICAL OFFICER	EMERGENCY MEDICAL OFFICER MPA	
WILDLAND FIRE CONTROL	WILDLAND FIREFIGHTER	WILDLAND FIRE OFFICER	WILDLAND CHIEF OFFICER MPA	
	FIRE SERVICE INSTRUCTOR	FIRE SERVICE INSTRUCTOR	FIRE SERVICE INSTRUCTOR ME	
	FIRE & LIFE SAFETY EDUCATOR	FIRE & LIFE SAFETY EDUCATOR		
	HAZARDOUS MATERIALS OFFICER	HAZARDOUS MATERIALS OFFICER	HAZARDOUS MATERIALS OFFICER MPA	

California Fire and Emergency Management Services
Certificate and Degree Options Model continued

CERTIFICATES	AA/AS DEGREES FIRE FIGHTER LEVEL I OFFICER	BA/BS DEGREES LEVEL II FIRE OFFICER	MASTERS DETREES CHIEF OFFICER FIRE CHIEF	DR. Ph.D. DEGREES FIRE CHIEF
PRIVATE SECTOR FIREFIGHTER	PRIVATE SECTOR FIREFIGHTER FIRE OFFICER	PRIVATE SECTOR FIRE OFFICER	PRIVATE SECTOR CHIEF OFFICER	PRIVATE SECTOR CHIEF OFFICER
VOLUNTEER FIREFIGHTER	VOLUNTEER FIREFIGHTER FIRE OFFICER	VOLUNTEER FIRE OFFICER	VOLUNTEER FIRE CHIEF	
OIL FIRE CONTROL	OIL FIRE CONTROL OFFICER	OIL FIRE CONTROL OFFICER		
	HARBORS AND SHIPBOARD FIRE CONTROL OFFICER	HARBORS AND SHIPBOARD CHIEF OFFICER	HARBORS AND SHIPBOARD CHIEF OFFICER	HARBOR FIRE CHIEF
RESCUE	RESCUE CONTROL OFFICER	RESCUE CHIEF OFFICER		
AIRPORT FIREFIGHTER	AIRPORT FIREFIGHTER FIRE OFFICER	AIRPORT CHIEF OFFICER	AIRPORT CHIEF OFFICER	AIRPORT FIRE CHIEF

California Fire and Emergency Management Services
Certificate and Degree Options Model continued

CERTIFICATES	AA/AS DEGREES FIRE FIGHTER LEVEL I OFFICER	BA/BS DEGREES LEVEL II FIRE OFFICER	MASTERS DEGREES CHIEF OFFICER FIRE CHIEF	DR. Ph.D. DEGREES FIRE CHIEF
FIREFIGHTER II				
DRIVER OPERATOR				
ADMIN. ASST. FIRE ADMIN.	ADMIN. ASST. FIRE ADMIN.	ADMIN. ASST. FIRE ADMIN.		
FIRE SECRETARY	FIRE SECRETARY	FIRE SECRETARY		
ADMIN. ASST. LAW	ADMIN. ASST. LAW	ADMIN. ASST. LAW		
FIRE DISPATCHER	PUBLIC SAFETY DISPATCHER	PUBLIC SAFETY COMMUNICATIONS		

CHATER 18
APPENDIX H
BIDDLE AND ASSOCIATES INC.

AN ENTRY-LEVEL FIREFIGHTER TEST SUCCESS STORY
By Richard Biddle

In 1985, the City of Torrance searched for a written test to use in its entry-level firefighter selection process. Some of the search objectives were to find a written test to measure reading ability, a test that minimized adverse impact against minorities, and a test, if challenged, that could win in court. The test selected that year was the Biddle & Associates' Firefighter TPM (Test Preparation Manual) and test.

The Biddle & Associates' TPM and test used for firefighter selection had been shown to reduce adverse impact against Hispanics during the class action suit of Martinez v. City of Salinas [DC CA, No. C-78-2608 SW (S.J.)]. Three years prior to the City of Torrance's administration of the 1985 TPM and test, the Western Fire Journal published an article that compared passing rates of Hispanics on a variety of tests used for screening entry-level firefighters.' That article reports the findings of a study which shows that the Biddle & Associates' TPM test has less impact on Hispanics than other tests used to screen firefighters. Also noteworthy, is the fact that the article shows all TPM type tests had lesser impact than non TPM type tests.

The TPM testing structure of allowing candidates to study and prepare themselves for a test has several benefits:

A. It replicates and simulates the process, applied during the academy and on the job, of learning information and being tested on that information;

B. It measures (in a fair, job-related format) a candidate's ability to read, comprehend, retain, and recall technical, job-related information;

C. It allows for educationally disadvantaged candidates to compensate for lack of academic skills by extra study, as they would be able to during the academy and on the job; and

D. It allows candidates exposure to the type of reading materials they will be learning on the job.

While the TPM test has shown less adverse impact than other types of tests, the 1985 administration of the Biddle & Associates' Firefighter TPM had enough adverse impact to attract the attention of the United States Department of Justice. The Justice Department, for the past several years, has been reviewing the practices used by many cities in Southern California to screen candidates for entry-level firefighter and police officer jobs. Several cities entered into consent decrees as a way to address the problem. The price of the consent decree for the City of Torrance was apparently too high.

The Justice Department filed suit against the City of Torrance in an action entitled United States of America v. the City of Torrance: the City of Torrance Police Department: Police Chief Joseph De Ladurantey (in his official capacity): the City of Torrance Fire Department: and Fire Chief Scott Adams (in his official capacity), USDC Case No. 93-4142 MRP (RMCx).

After negotiations for a settlement failed, the City endured more than 200 depositions, spent several million dollars in defense costs and hundreds of hours of staff time, before participating in several weeks of trial. Finally, on June 4, 1996, Judge Pfaelzer published her Memorandum of Decision, which stated that the tests used "are job-related and

are in fact consistent with business necessity." This article will describe the factors used in the defense of one of the tests involved in that litigation to show the extent of detail needed to prevail in these kinds of cases.

Success of Others

As the defense plans started to crystalize, it was quite apparent that most employers which are sued for their use of written tests in fire and police department hiring and promotion lose those suits. Some of the notable exceptions have been:

•Martinez v. City of Salinas [DC CA, No. C-78-2608 SW (S.J.)] for the Biddle & Associates' entry-level TPM (Test Preparation Manual) and test used for hiring firefighters.
•Parks v. City of Long Beach [DC CA, No. 84-1611 DWW (Px)] for written test, oral interview, in basket exercises, and departmental evaluations used to promote fire engineers and captains.
•Simmons v. City of Kansas City [DC KS, No. 88-2603-0] for the written tests, performance appraisals, and oral interviews used to promote detectives, sergeants, and lieutenants.
•Sanchez v. City of Santa Ana [DC CA, No. CV-79-1818 KN] for the written test used to promote sergeants.

Each of the above four cases involved evaluating the job relatedness of a written test for a public safety job. Some of the cases involved more than one written test. In the Salinas case, there was one written test used with a TPM for firefighter hiring. In the Long Beach case, there was a written test used for fire engineer and one used for fire captain. In the Kansas City case, there were nine written tests (three for detective, three for sergeant, and three for lieutenant). In the Santa Ana case, there was a written test used for sergeant.

In each of the four cases identified above, Biddle & Associates' GOJATn (Guidelines Oriented Job Analysis™) job analysis and content validation technique was used in the successful defense. The Firefighter TPM used in 1985 with the City of Torrance was also developed and validated with GOJA.

Development of the Biddle & Associates' Test Preparation Manual ("TPM"**)**

The version of the Test Preparation Manual ("TPM") test used in the 1985 firefighter selection process in Torrance was originally written in 1984, under the direction of Biddle & Associates, by qualified subject matter experts working in fire departments similar to that of the City of Torrance. This was the third version of the Firefighter TPM. Information in the TPM represents a carefully selected sample of job and academy materials frequently used by firefighters.

The TPM approach measures a candidate's reading ability, including reading, comprehending, retaining, and recalling, which are necessary prerequisites to critical, observable work behaviors and/or work products. This is accomplished by providing candidates with representative work sample of materials in booklet form (the TPM).

The TPM, consisting of 196 pages in six chapters, represents a sample of a broad range of reading material types (different sentence structures, contexts and formats) read by firefighters on the job and in the academy. The six chapters in the 1985 TPM are: Hoses and Ladders; Fire Prevention; First Aid/Rescue; Salvage/ Ventilation/ Overhaul; Fire Chemistry; and Tools and Equipment. The candidates were provided several weeks to study the TPM prior to taking the exam. From Biddle & Associates' past testing experience, this has been shown to be an adequate time for studying the TPM.

The multiple choice written test was constructed from the material in the TPM in order to measure each candidate's ability to read, comprehend, retain, and recall the technical information contained in the TPM. All of the answers to the items on the test are in the TPM. The test used in 1985 was Biddle & Associates' stock test form B, which has 120 multiple choice items (20 items per chapter in the TPM). Each item has four alternatives: one key and three distracters. The TPM and test were carefully designed in light of the Uniform Guidelines on Employee Selection Procedures (1978), and in 1982, the court, in the Salinas case found the TPM and test to be job related and valid under Title VII and the Uniform Guidelines. The Court stated in that case:

This Court finds that the written examination for entry-level fire fighter positions in use by the defendants at the time of trial herein (hereinafter "TPM examination") is job-related and that the validation of said examination is appropriate under Title VII and the Uniform Guidelines on Employee Selection Procedures, 28 C.F.R. §50.14.

The TPM test is designed to replicate the type of reading materials that firefighters read on the job and simulate the process used to read, comprehend, retain and recall firefighter job and academy reading materials. By using firefighting reading materials, presumably, the materials are of interest to the candidates. While reading other subjects certainly uses the abilities of reading, comprehending, retaining, and recalling, one might argue that interest could be a factor that might impact scores.

Manifestly, the ability to read encompasses the abilities to comprehend what is read, retain it, and recall it -- in both the test-taking setting and in the academy or on the job. Furthermore, more than 20 validation studies relating to the TPM test confirm not only that reading ability is very important to the firefighter job, but that it is in fact differentiating (meaning that a higher level of reading ability equates with a higher level of job performance). From jurisdiction to jurisdiction, the reliability coefficient (which measures the reliability or consistency of test performance) is routinely high.

In the experience of Biddle & Associates, there is a statistically significant relationship between the amount of time spent studying the TPM and performance on the test. This supports the conclusion that the test measures reading ability as described above.

The TPM indicates that the reader may find some of the material in the manual to be outdated or even incorrect. The reader is advised to ignore such inaccuracies precisely because the test will measure only the ability to read, comprehend, retain, and recall the material -- not whether the material is substantively correct.

The TPM test has been validated as a selection device for the position of entry-level firefighter with more than 20 departments, many of which are in Southern California jurisdictions near the City of Torrance:

City of Alameda, California City of Anaheim, California City of Costa Mesa, California City of Fountain Valley, California City of Gainsville, Florida City of Garden Grove, California City of Huntington Beach, California City of La Habra, California City of Laguna Beach, California City of Long Beach, California City of Orange, California City of Plano, Texas City of Salinas, California City of Salt Lake City, Utah City of San Clemente, California City of San Leandro, California

City of Santa Ana, California City of Santa Monica, California City of Seal Beach, California City of Torrance, California City of Ukiah, California City of Westminister, California County of Imperial, California Santa Ana Community College, California

Job Relatedness

One of the disputed issues at trial was the burden of proof for the test, after the Justice Department shows that the test had an adverse impact against minorities.2 The City argued that the burdens should be those explained in Wards

Cove Packing Co. v. Atonio, 490 U.S. 642 (1989). The Justice Department argued that the burdens should be those in Section 105 of the 1991 Civil Rights Act, which became effective on November 21, 1991.

If the Wards Cove standard was adopted by the Court, the City would need only to produce evidence of a business justification that the test served in a significant way the legitimate goals of the City.3 If the 1991 Civil Rights Act standard was adopted by the Court, the City would need to prove business necessity by proving the test is job related.

The concepts of "business justification" and "business necessity" are critical for those who practice in the EEO field, because we often focus our work, attempting to apply, in a practical way, the standards specified in the Uniform Guidelines on Employee Selection Procedures (1978), and in court decisions (which may or may not defer to the Guidelines). The Uniform Guidelines state that:

If adverse impact exists, it must be justified on grounds of business necessity. Normally, this means by validation which demonstrates the relation between the selection procedure and performance on the job. (See Uniform Guidelines, Section II.)

Since there is no requirement that a challenged practice be essential or indispensable to the employer's business, and given that the Uniform Guidelines' standard is one of "business necessity," it was argued during the City of Torrance trial that the standards set forth in the Uniform Guidelines exceed those for business justification. However, the Court ruled under both standards.

The Uniform Guidelines need not be relied upon to provide a fundamental business justification for the use of the TPM and test which is: (a) reading ability (i.e., the ability to read, comprehend, retain, and recall technical information) is needed by those who attend the fire academy and who perform the firefighter job, and (b) the process of having candidates read material, comprehend it, retain it, and prove they can recall it by taking a test on the material is a job-related way to measure reading ability.

Tie City of Torrance firefighter job analyses confirmed the fact that Torrance firefighters need reading ability to perform critical and important academy and job duties. The reading ability identified by the subject matter experts is defined on the job analysis as:

Read, retain, recall and appropriately interpret complex technical documents in English, including blueprints, diagrams, fire fighting manuals, " " books, codes, ordinances, laws and general orders.

The TPM is not a full sample of all materials that must be read by firefighters in the academy. It is not a full sample of all materials that must be read on the job. It is a reasonable sample of both.

The answer to each question on the test comes from the TPM. Numerous versions of the test on the TPM have been administered to entry-level firefighter candidates in many different jurisdictions. All the versions have shown reliability coefficients in the low .9's. Reliability coefficients that are in the low .9's are considered high. The reliability coefficient is an index of the internal consistency of a test.

The TPM test has 20 questions from each of six chapters; it provides a reasonable sample of the materials in the TPM.

In addition to the fundamental business justification described above, which does not rely on the Uniform Guidelines, three additional defenses for the TPM and test were presented at trial as independent bases for finding the TPM and test to be job related using the Uniform Guidelines:

A. Evidence of validity from other studies: cooperative studies (Uniform Guidelines Section l5F).
B. Evidence of validity from other studies: individual content validity studies, not involving the City of Torrance (Uniform Guidelines Section 15E(2)).
C. Evidence of content validity from a study conducted at the City of Torrance for the City's use of the TPM and test in 1985 (Uniform Guidelines Section 15C).

Each of the three Uniform Guidelines sections quoted above specifically allows a content validation strategy for demonstrating the job relatedness of a test.

It is important to note, since the TPM and test combination measure reading ability, that there is no requirement in the Uniform Guidelines that the ability measured be a representative sample of the ability needed on the job. Section 14C(1) of the Uniform Guidelines states in part:

Selection procedures which purport to measure ...abilities may in certain circumstances be justified by content validity, although they may not be representative samples, if the ...ability measured by the selection procedure can be operationally defined as provided in section 14C(4) below, and if that ...ability is a necessary prerequisite to successful job performance.

The GOJA job analysis operationally defined reading ability, according to the requirement stated above. The reading ability was operationally defined with the specific duties in the various duty domains for which reading ability is needed. If reading ability was a necessary prerequisite for any of these required duties, it would be job related. Reading ability was identified as needed for at least 20 duties in the job analysis.

Biddle & Associates' GOJA System Used in All the Validation Work

GOJA (Guidelines Oriented Job Analysis) is more than a job analysis method. It is a methodology for developing content valid employment selection tools such as job analyses, selection plans, job-specific supplemental application forms, and job-related performance appraisal forms to address the requirements of the Uniform Guidelines on Employee Selection Procedures. By using the GOJA system, the technical requirements of the Uniform Guidelines are addressed as part of the system. GOJA provides the format to be used for the linking process called for by the Uniform Guidelines with content validity. GOJA, through its design, addresses the technical requirements of Sections 14C(1)-(4), (6)-(9) of the Uniform Guidelines. GOJA has been in use throughout the United States since the mid 1970's.

The GOJA system used for the City of Torrance validation work for the 1985 TPM test was used and the process supported in each of the following fire and police cases:

- Martinez v. City of Salinas for firefighter.
- Parks v. Citv of Long Beach for fire engineer and captain.
- Simmons v. City of Kansas City for detective, sergeant, and lieutenant.
- Sanchez v. City of Santa Ana for sergeant.

GOJA has been discussed in several articles and textbooks used in colleges and universities throughout the United States:

- Personnel Management and Human Resources in Local Government; James A. Buford, Jr.; Center for Governmental Services, Auburn University; 1991.
- Human Resource Selection; Robert S. Gatewood, University of Georgia, and Hubert S. Field, Auburn University; Drydan Press; 1986.
- Recruiting and Selection: Concepts and Techniques for Local Government; James A. Buford, Jr.; Alabama Cooperative Extension Service, Auburn University; 1985.

- Personnel and Human Resource Management; Randall S. Schuler, New York University; West Publishing Company; 1984.
- Job Analysis: An Effective Management Tool; Stephen E. Bemis, Ann Holt Belenky, and Dee Ann Soder; Bureau of National Affairs, Washington D.C.; 1983.
- "Entry-Level Exam Examined in Court"; Tom Campbell; The Western Fire Journal; July, 1982.
- "Mass Validation: The Key to Effectively Analyzing an Employer's Job Classifications"; Richard D. Sturn; Public Personnel Management; September/October, 1979.

The consent decree in Calderon v. Imperial County, specifically exempts the County from initiating a stringent selective certification procedure for all classifications that have been validated under the "GOJA" program.

GOJA was designed to address the content validity requirements of the Uniform Guidelines. It has been applied in numerous settings and has been reviewed in articles and text books. The acid test is that GOJA has provided a foundation for successfully developing, validating, and defending a variety of tests in court.

Cooperative Validity Studies (Uniform Guidelines Section 15F Defense)

One of the consortia the California Selection Consulting Center developed in 1972-1974 was to validate entry-level firefighter examinations. More than 70 jurisdictions were involved in that study, including the City of Torrance. The job analysis developed from that cooperative study showed that reading ability was a critical ability needed for firefighters in those agencies.

In about 1977, Biddle & Associates led a consortium of jurisdictions to develop and validate an entry-level firefighter TPM and test. The cities involved in that cooperative study were mostly from Orange County, California: Anaheim, Costa Mesa, Fountain Valley, Garden Grove, Huntington Beach, La Habra, Long Beach, Orange, San Clemente, Santa Ana, Seal Beach, and Westminister. In addition, Santa Ana Community College participated because of its fire academy. The job analysis developed from that cooperative study showed that reading ability was a critical ability needed by firefighters in those agencies. The second version of the TPM for firefighters was developed during the 1977 Orange County consortium effort. The TPM test was validated by the participating agencies. It was this version of the TPM and test that were supported as content valid in the Salinas case.

The job analysis conducted by the Selection Consulting Center demonstrated that reading ability was essential for many critical work areas for the firefighter job in 1972-1974 for a large number of agencies. The City of Torrance participated in this cooperative study. The Orange County consortium in 1977 demonstrated the same result for reading ability and provided validity for the TPM and test. Under Section 15F of the Uniform Guidelines, these cooperative studies demonstrated that reading ability is needed for firefighters and the TPM and test were job related for the selection of firefighters, including firefighter candidates for the City of Torrance. This is an example of generalizing the validity obtained from cooperative studies to a specific employer - validity generalization.

Content Validity Studies Conducted Elsewhere (Uniform Guidelines Section 1SE(2) Defense)

After the Orange County consortium, which developed and validated the second version of the TPM and test, Biddle & Associates conducted job analyses and validated the firefighter TPM and test for several other cities, including the California jurisdictions of Alameda, San Leandro, Salinas, Ukiah, Santa Monica, Torrance, and Imperial County, as well as cities in other states: Salt Lake City (Utah), Plano (Texas), and Gainsville (Florida).

The job analysis developed from each of these studies showed that reading was a critical ability needed by firefighters in those agencies and that the TPM was content valid for its use.

The job analysis conducted with these jurisdictions for the firefighter job continued to show that reading ability is needed for many critical duties the firefighter must perform. Under Section 15E(2) of the Uniform Guidelines, these separate content validation studies support the use of the TPM and test for the firefighter job in Torrance, where reading ability is also needed by firefighters. The studies performed elsewhere provide more support for validity generalization to the City of Torrance.

Torrance Content Validation Study (Section 1SC Defense)

A validation study was conducted specifically for the City of Torrance Civil Service Department, beginning in April 1993 and ending in June 1993. The study addressed the specific provisions of Section 15C of the Uniform Guidelines. The purpose of the study was to transport the validation of the TPM test to the Torrance Fire Department, where the test had been used to screen 561 candidates in November 1985.

The same process and GOJA procedure were used to transport and establish the validity of the City of Torrance's TPM and test as were used successfully in the Salinas case.

The 1985 TPM and test administered in the City of Torrance was the third version of the firefighter TPM and test. It is very similar to the second version which was supported in the Salinas case referenced above. For example, the third version's chapter on "Fire Chemistry" was called "Fire Behavior" in version two; the "Hoses & Ladders" chapter has the same title in both versions; the "Tools & Equipment" chapter in version three was called "Tools & Forcible Entry" in version two; the "Ventilation/Overhaul/Salvage" chapter in version three was called "Ventilation, Salvage, & Overhaul" in version two; and the last two chapters in both versions carried the same titles: "First Aid & Rescue" and "Fire Prevention." Not only were the chapter contents between version two and three of the TPMs very similar in terms of content, but the chapters varied in length about the same: version two 21-36 pages per chapter; version three 24-37 pages per chapter. Each test had the same number of questions per chapter: 20 on each. The formats for the tests were the same type of multiple choice type test items. The reliability coefficients between samples of the tests were very similar (in the low .9's). Comparing the level of difficulty of the City of Salinas administration (73 % average) to the level of difficulty from the City of Torrance administration (78 % average) shows the City of Torrance administration to be slightly higher (i.e., maybe the applicants studied more for the Torrance exam than for the Salinas test). However, the standard deviations were almost the same (14.2 for the City of Salinas and 14.12 for the City of Torrance), meaning the dispersion of scores around the average was very similar between the two test administrations. The two TPMs and tests were very similar in terms of concept, content, and validation.

Seven subject matter experts were selected to participate in the City of Torrance validation study, each of whom had knowledge of the 1985 firefighter job and was familiar with the subject matter taught in the 1985/1986 Fire Academy.

A job analysis of the 1985 entry-level firefighter classification was conducted using the subject matter experts on May 11-12, 1993 from 8:00 a.m. through 4:00 p.m. The GOJA job analysis method was used. Pursuant to GOJA, a draft firefighter job analysis form (called Job Related Job Description), developed by Biddle & Associates from work with numerous other fire departments, was provided to the subject matter experts (i.e., job incumbents or supervisors) for their independent review.

It is important to note that the seven subject matter experts from the City of Torrance were not the first seven to review the firefighter job analysis. Approximately 200 other subject matter experts had reviewed it for other TPM validation studies, physical ability test validation studies, or oral interview validation studies dealing with the firefighter job classification. Our long series of job analysis and validation efforts have shown the firefighter job to be about 90 % the same from jurisdiction to jurisdiction. Reading ability has been identified in each job analysis we have conducted for firefighter. The only parts of the job analysis relevant for validating the TPM and test are those involving reading ability.

Torrance subject matter experts modified the draft job analysis to ensure that it accurately reflected the duties, knowledge, skills, abilities and physical characteristics that were required for successful performance of the firefighter job in Torrance in 1985. The final job analysis, which was the result of this process, reflects the opinions of at least five of the seven subject matter experts.

Expert testimony at trial stated that seven subject matter experts was a sufficient number of subject matter experts in light of (1) the size of the Torrance Fire Department, (2) the similarity among the jobs done by many of the members of the Department, and, most importantly, (3) that approximately 200 other subject matter experts reviewed very similar versions of the job analysis before the seven from the City of Torrance. Also, during the 1993 validation work for the City of Torrance, a second group of Torrance subject matter experts was working with the same beginning draft job analysis document as the other seven (the total was 14 from the City of Torrance, seven for the 1985 test administration and seven for the future test administration). Both groups of seven subject matter experts agreed that reading ability was needed for Torrance firefighters. However, even if the seven Torrance subject matter experts involved with the 1985 administration had been the only subject matter experts, the 5 of 7 standard (i.e., 5 of the 7 subject matter experts agreeing) was approved in Contreras v. City of Los Angeles, 656 F.2d 1267, 1281-82 (9th Cir. 1981).

In the job analysis workshop, the work behaviors and their associated tasks (called duties) were grouped into common domains. When the duties resulted in work products, these were described in the duties. The duty domains identified were as follows:

A - Station Duties; B - Apparatus and Equipment Maintenance; C - Readiness Training; D- Inspections; E - Driving and Positioning Apparatus; F - Rescue and First Aid; G - Deploying Hoses and Pumping; H - Laddering; I - Ventilation and Forcible Entry; J - Extinguishing Fire; K Salvage and Overhaul; L- Probationary Period; and M - Special Assignments.

The knowledge, skills, abilities and other characteristics needed to perform the duties were identified in Domain N.

The physical characteristics needed to perform the duties were identified in Domain O.

For each duty, the subject matter experts identified:

A. The “frequency” with which the duty was performed (listed as daily, weekly, bi-weekly, monthly, bi-monthly, annually, or bi-annually);
B. The “importance” level of the duty. A scale of 1 - 5 (5 = extremely critical/1 = not important), was used; and
C. The “bases for importance” rating, which lists the areas of the job that are affected, if the duty is not performed or performed in a poor manner.

The operational definitions of knowledge, skills and abilities are included in domain N. Each knowledge is defined in terms of a body of learned information. Each skill or ability is operationally defined in terms of the duties within domains for which the skill or ability is needed. In addition, each knowledge is linked to the duties for which the knowledge is needed. Domain N also contains information on the degree of importance of each knowledge, skill, ability or other characteristic, whether or not it can be learned in a brief orientation and if it is performance differentiating.

After completing the job analysis, the subject matter experts compared the content of the TPM test to the City of Torrance fire department reading materials. This was done in order to evaluate if the content and use of the TPM test was similar and related to the reading material used on the job and in the academy. Each of the seven subject matter experts completed a Fire TPM Validation Survey from which these conclusions on job relatedness were made. The

subject matter experts were instructed to reference specific job and academy reading materials when the survey referred to job or academy reading materials. The conclusions from this survey are found below:

A. Subject matter experts' average opinions were that five (5) hours of reading were spent during each "on" day in the academy.
B. Subject matter experts' average opinions were that four (4) hours of reading were spent during each "off" day in the academy.
C. All seven (7) subject matter experts stated that they could not have passed the academy without the ability to read, comprehend, retain and recall written information.
D. All seven (7) subject matter experts stated that they encountered some reading materials in the academy that required study to memorize them.
E. All seven (7) subject matter experts stated that they encountered some reading materials on the job that required study to memorize them.
F. The subject matter experts' average opinions were that a probationary firefighter spends 4.6 hours per day studying/reading written information on the job.
G. The subject matter experts' average opinions were that non-probationary firefighters spend an average of 2.9 hours per day studying/reading written information on the job.
H. All seven (7) subject matter experts stated that they could not successfully perform the duties of the firefighter job without the ability to read, comprehend, retain and recall written information.
I. All seven (7) subject-matter experts stated that the TPM, as a whole, representatively samples some of the reading ability needed to read, comprehend, retain and recall technical information in some policy books, procedure manuals and other reading manuals used on the job and in the academy.
J. All seven (7) subject matter experts stated that the format (general makeup and structure) of the materials in the TPM was similar to the reading materials on the job and in the academy.
K. All seven (7) subject matter experts stated that the context (sentence structure) of the material in the TPM was similar to the reading materials on the job and in the academy.
L. All seven (7) subject matter experts stated that the process of having the candidate read the materials in the TPM replicates the reading part of the job and the academy.
M. All seven (7) subject matter experts stated that the process of reading, comprehending, retaining and recalling materials in the TPM minimized the " inferential leap" (i.e., the difference or "gap") between those materials studied for the test and some of the required reading materials that must be read on the job and in the academy.

The subject matter experts all confirmed that the TPM measures and is a representative sample of the reading ability required for successful job performance.

The subject matter experts identified the reading ability required on the job to be:

A. Critical for successful job performance (subject matter experts assigned it an importance level of 4 on a scale of 1 through 5),
B. Not learned in a brief orientation,
C. Performance differentiating, and
D. Essential for successful performance of specific tasks/duties listed on the job analysis.

A matrix was prepared that demonstrates how the TPM representatively samples job and academy reading materials. This matrix was constructed by asking the subject matter experts and training officers to identify the critical/important reading materials that are frequently read, used and/or referenced on the job and used for training during the academy. The subject matter experts were then asked to identify the chapters, pages or sections of each document that were similar to each TPM chapter.

Readability analyses were conducted on a sample of the City of Torrance Fire Department's job and academy reading materials. The readability process used is called the Fog Readability Index. The Fog Readability Index is a scale intended to estimate the "grade reading level" of a document (e.g., 11.0 index = 11th grade reading level). Each reading sample taken was a minimum of 100 words. The readability analyses were conducted to compare the reading difficulty levels of the department's current reading materials (job and training) to the TPM and test.

Findings based on a study of 12 samples of 100 words each from four manuals used on the job and in the academy showed the average job and academy reading material reading level to be 14.9. The average readability of the TPM is 11.5; the average readability of the test is 11.7. Therefore, the reading level of the TPM and test are comfortably below the level requiredfor the academy and the job.
The subject matter experts reviewed all 120 items on the 1985 test. Of the 120 items, the subject matter experts found 118 items to be content valid and had problems with two of the items:

A. Item number 62: The key for this item could have been A or B. During the item review workshop, subject matter experts discussed the problem with this item and rated it accordingly.
B. Item number 72: The key for this item was not clearly present in the TPM. During the item review workshop, subject matter experts discussed the problem with this item and rated it accordingly.

The remaining items on the test could be referenced in the TPM, and were content valid, clear and understandable to the subject matter experts. This constitutes 98% of the questions, which is at the high end of the acceptable range.

In summary, the content validity study conducted at the City of Torrance for the 1985 administration of the firefighter TPM and test addresses the content validity requirements of Section 15C of the Uniform Guidelines and the technical requirements in Section 14C. The study, conducted in 1993, demonstrates that the TPM and test are job related and content valid. Reading ability is needed by Torrance firefighters, during the academy and on the job. Although a representative sampling is not needed for a reading ability test under the Uniform Guidelines (see Section 14C(1)), the Torrance subject matter experts stated that as a whole, the TPM and test representatively samples reading ability needed in the academy and on the job. The Torrance subject matter experts also stated that the format of the materials in the TPM was similar to the format of the reading materials in the academy and on the job, and that the context and process were also similar to reading in the academy and on the job. All the subject matter experts stated that the TPM and test minimized the inferential leap between the materials studied in the TPM for the test and the materials read in the academy for a test or the materials read on the job, which is also sometimes tested with paper and pencil multiple choice type tests.

Adverse Impact and Method of Cutoff Determination

The TPM is based on a concept designed to minimize adverse impact. Candidates who have educational disadvantages may make extra efforts in obtaining a high score on the TPM test by extra study. Several public employers across the nation have used the TPM concept to reduce adverse impact, and it is a nationally recognized method among test publishers.

In order to estimate a minimum cutoff level for the 1985 test, Biddle & Associates used a modified Angoff cutoff technique. The subject matter experts used Cutoff Analysis Input Forms to confirm the key and the page reference in the TPM, and to give their opinions on the percentage of minimally qualified candidates who were likely to answer the item correctly for each item on the test. All of this information was thoroughly described orally to the subject matter experts and given to the subject matter experts in writing. A minimally qualified candidate was defined as: one who possesses a competent level of the ability being measured successfully to perform the job. The information gathered from subject matter experts assisted Biddle & Associates in developing a cutoff level for the 1985 test.

After the workshop, the opinions from the survey form were tabulated and summarized. The mean average of subject matter experts' opinions on the percent of minimally qualified candidates expected passing was 70.33 %, or 84.4 of the 120 items answered correctly. In order to make adjustments for the statistical estimation of the cutoff method, the mean average was reduced by one (1) standard error of measurement (SEM). To calculate the SEM, the reliability and standard deviation of the test were needed. The reliability of the test was determined from six test administrations at other jurisdictions. The lowest reliability coefficient of the six samples (.92) was used. All of these reliability coefficients came from the same base pool of test items as form B (the one used in 1985).

The standard deviation (14.12) of the test was available. Using the above statistics, the standard error of measurement (SEM) equals 4. Thus, one SEM below the mean is 80.41, or 80/120 items answered correctly.

At least four statistical and human factors should be considered when determining whether to lower the mean by one, two, or three SEMs. The factors are:

A. The possibility of sampling error in the study; B. The consistency of the results (internal comparisons of panel results); C. The supply of and demand for the position being tested; and D. The racial composition of the job classification.

At least one SEM should be used. After the application of the SEM adjustment defined above, the resulting score is one that reflects the minimum competency level of the test.

It has been the policy of Biddle & Associates to recommend a cutoff that minimizes adverse impact when a cutoff is set above the minimum competency level. Biddle & Associates recommends using tests of both statistical significance and practical significance when analyzing tests for adverse impact.

Ranking/Setting Cutoff Scores Above Minimum Competency

Evidence to support the use of ranking was gathered for the test. The subject matter experts were given a Test Validation Survey on which they were asked:

In your opinion, will candidates who score higher than the minimally-qualified level of the test be able to perform the reading portions of the job better than those who score at the minimally qualified level?

All seven subject matter experts responded "Yes" to the above question. The subject matter experts also identified reading ability as performance differentiating on the job analysis.

The Uniform Guidelines on Employee Selection Procedures (1978), Section 14C(9), state the following regarding the use of ranking on employment-related tests:

Ranking based on content validity studies. If a user can show, by a job analysis or otherwise, that a higher score on a content valid selection procedure is likely to result in better job performance, the results may be used to rank persons who score above minimum levels. Where a selection procedure supported solely or primarily by content validity is used to rank job candidates, the selection procedure should measure those aspects of performance which differentiate among levels of job performance.

The evidence obtained from the Torrance subject matter experts provided the support by means of the job analysis and the Test Validation Form. Subject matter experts from numerous other cities provided the same responses. Since the subject matter experts provided information to support ranking, setting a cutoff higher than the minimum competency score was acceptable.

Section 5H of the Uniform Guidelines states the following regarding ranking and cutoff scores:

Where cutoff scores are used, they should normally be set so as to be reasonable and consistent with normal expectations of acceptable proficiency within the work force. Where applicants are ranked on the basis of properly validated selection procedures and those applicants scoring below a higher cutoff score than appropriate in light of such expectations have little or no chance of being selected for employment, the higher cutoff score may be appropriate, but the degree of adverse impact should be considered.

Page 24 of the Society for Industrial and Organizational Psychology Principles for the Validation and Use of Personnel Selection Procedures (Third Edition, 1987) ("SIOP Principles") states:

If a selection instrument measures a substantial and important part of the job reliably, and provides adequate discrimination in the score ranges involved, persons may be ranked on the basis of its results.

The TPM and test process measure reading ability that is needed in the academy and on the job. The reliability of the test is very high at .92. The standard deviation of the test is 14.12, which shows an adequate discrimination in the score range. Because of the factors listed above, plus the fact that a majority of the 14 subject matter experts with the City of Torrance said that reading ability was a differentiating characteristic, and the fact that the majority of the approximately 200 other subject matter experts who previously have reviewed very similar job analyses have said the same thing for their jurisdictions, it was concluded that it is appropriate to rank candidates based on their scores on the test.

It is also appropriate to set the cutoff score above the minimum competency score. The Torrance validation study data shows that the minimum competency score is 80. Thus, Torrance should not have set a cutoff score below 80 (out of 120 items). The data provided support for setting a cutoff score higher than 80, however. Cutoff scores may be set higher than the minimum competency score, if the data supporting the test show that the skills or abilities measured by the test are performance differentiating, or if there are so many candidates that the lower score is not reasonable. Both conditions apply in the case of Torrance's administration of the TPM test in 1985.

The City selected a lower score of 94 (78%) as the cutoff, which corresponds to the overall average level of difficulty for this particular test administration. The cutoff score of 94 passed 309 candidates. If the City had used the minimum competency cutoff score of 80, 471 candidates would have passed. Setting a cutoff score higher than minimum competency was reasonable in this situation, since the City expected to hire a very limited number of the candidates from this recruitment.

Overall Summary

The 1985 administration of the firefighter TPM and test is job related for four reasons, three of which are supported with content validity under the Uniform Guidelines, but only one of the below is needed to justify its use by the City of Torrance:

A. the fundamental business justification for the use of the TPM and test has nothing to do with the Uniform Guidelines. It applies to the Wards Cove type defense. The fundamental business justification defense is that reading ability is needed by those who attend the fire academy and who perform the firefighter job in the City of Torrance, and the process of having candidates read material, comprehend it, retain it, and prove they can recall it by taking a test on the material assigned is a job related way to measure reading ability. Since reading ability can be justified as job related for firefighters, having more than a minimum amount is a reasonable requirement. Setting a cutoff higher than minimum competency is reasonable, given the limited number of openings and the expense incurred in the screening process.

B. under Section 15F of the Uniform Guidelines, evidence of content validity from cooperative studies can be used to establish job relatedness. This is a type of validity generalization. Applying this theory, the California Selection Consulting Center conducted a study in about 1972-1974 with approximately 70 agencies, including the City of Torrance, and established that reading ability was needed for the firefighter job. In about 1977, Biddle & Associates conducted a cooperative consortium study in Orange County and also found that reading ability was needed in the firefighter job and during the academy. The Orange County consortium also developed and validated the second version of the TPM and test. Together these studies can be used to justify the City of Torrance's use of the TPM and test in 1985. Setting a cutoff higher than minimum competency is reasonable, given the limited number of openings and the expense incurred in the screening process.

C. under Section 15E(2) of the Uniform Guidelines, evidence of content validity studies conducted elsewhere can be used to establish job relatedness. This is another application of validity generalization. Biddle & Associates has conducted firefighter TPM and test validation studies for several other jurisdictions, including the California cities of Alameda, San Leandro, Salinas, Ukiah, Santa Monica, Torrance, and Imperial County, and cities in other states: Salt Lake City (Utah), Plano (Texas), and Gainsville (Florida). All of these studies demonstrate that reading ability is needed in the firefighter job and during the academy, and that the TPM and test are content valid. Since the job analyses show that reading ability is needed for firefighters in the City of Torrance, the TPM and test can be used by the City of Torrance under Section 15C(2). Setting a cutoff higher than minimum competency is reasonable, given the limited number of openings and the expense incurred in the screening process.

D. Biddle & Associates conducted an employer-specific validation study under Section 15C of the Uniform Guidelines. This study demonstrated that the TPM and test were content valid and job related for the City of Torrance. Setting a cutoff higher than minimum competency is reasonable, given the limited number of openings and the expense incurred in the screening process.

The second version of the firefighter TPM and test had already been supported by one federal court. The third version of the firefighter TPM and test is very similar to the second version in concept, design, and effect. Judge Pfaelzer, on June 4, 1996, supported the third version of the firefighter TPM and test.

‘ Campbell, Tom, "Entry-Level Exam Examined in Court," The Western Fire Journal, July, 1982.

2 For a more complete discussion, see Biddle, R.E., "Disparate Impact with Small Samples, " California Labor & Employment Law, Vol. 9 No. 6, Fall, 1995; Biddle, R.E., "Disparate Impact Reference Trilogy," Labor Law Journal, Commerce Clearing House, November, 1995; and Biddle, R.E., "The Role of Two Statistical Approaches in EEO Cases," Labor Law Journal, Commerce Clearing House, April, 1996.

3 For a more complete discussion, see Biddle, R.E., "Wards Cove Packing v. Atonio Redefines EEO Analyses," Personnel Journal, June, 1990.

CHAPTER III

RECOMMENDATIONS AND CONCLUSION

Increased educational demands for firefighters strengthen the need for a training delivery system that broadens the scope of the courses offered while reducing the duplication that has existed between the various educational entities. By clearly delineating the focuses of the community colleges, the California State University system, and the Office of the State Fire Marshal, each can satisfy specific training needs within the fire service without incurring the expense created by the unnecessary duplication of services. As publicly-funded organizations, the community colleges, the California State University system, and the Office of the State Fire Marshal have all experienced the reduction of resources in recent years, and they have worked together on this project to respond to the financial impact without reducing the training available to members of the fire service. In the continuing effort to provide these services in the most fiscally-responsible manner, the Fire Technology Subcommittee of the 1994 - 1996 Public Safety Curriculum and Professional Development Project makes the following recommendations:

- continue negotiations between the Office of the State Fire Marshal and the California Fire Directors Association to establish a mutually agreed upon accreditation process
- continue the collaboration between the community colleges and the California State University system to establish an articulation process that provides a seamless transition from community colleges to four-year colleges
- establish a rotational pattern on a three-year cycle that will ensure the regular updating of all classes
- utilize videoconferencing and electronic communication options to provide for the wide representation of Fire Technology educators in ongoing discussions to address training needs to produce a dramatic reduction in cost and improved educational efficiency
- collaborate with high school Tech Prep programs to promote fire service careers
- collaborate with the Office of the State Fire Marshal to develop a college catalog statement regarding fire service training standards for community college programs that meet SFM standards

Fire Technology educators throughout California are pursuing these objectives through their active participation in professional organizations such as the California Fire Technology Directors Association, the California Professional Firefighters, the California State Firefighters Association, the California Fire Chiefs Association, the State Board of Fire Services, and other professional groups. In addition, representatives sit on the State Fire Marshal's Office Statewide Education Advisory Committee as well as on the Statewide Advisory Committee for Public Safety Education where members representing all areas of Public Safety work together to promote and refine education within their disciplines. The realization of the six recommendations listed above would substantially add to their efforts to provide the recency, standardization, and relevancy that are crucial to preparing students for careers in the fire service.

APPENDIX A

STEERING COMMITTEE MEMBERS

STEERING COMMITTEE MEMBERS

Project Staff

Hugh Foster, Golden West College - Project Director
Tonya Hilligoss, Sacramento City College - Project Consultant
Sue Oliviera, South Bay Regional Public Safety Training Consortium—Northern California Coordinator
Frank Patino, Rio Hondo College - Southern California Coordinator

Subcommittee Chairs

Correctional Science - Jan Hayes - Project Officer, Correctional Science Curriculum Project - Merced College
Environmental Technology/HazMat - Ann Boyce - HazMat representative to the Statewide Advisory Committee for Public Safety Education - Bakersfield College
Fire Technology - Bill Lane - Past-President, California Fire Technology Directors Association - Allan Hancock College (retired)
Law Enforcement - Fred Allen - Dean of Instruction, Butte College/Project Coordinator, Statewide Advisory Committee for Public Safety Education

Members

Ron Allen - POST - Chief, Training Deliverance and Compliance
Chris Almeida - K-12 Tech Prep Representative, California Department of Education
Armand Burruel - California Department of Corrections representative to the Statewide Advisory Committee for Public Safety Education - Human Resources Development Office, California Department of Corrections
Art Cota (alternate for Steve Hart) - Division Chief, Training Division, California State Fire Marshal's Office
Paul Dempsey - California Youth Authority representative to the Statewide Advisory Committee for Public Safety Education - Director of Training, California Youth Authority
Engquist, Marv - Past-President, CAAJE - Cerritos College
Tom Feierabend - Past-President, State Association of Fire Educators; President, California Fire Technology Directors Association - Mt. San Antonio College
Gretchen Fretter - Past-President, CADA - Los Medanos College
Max Futrell - Four-year college representative to the Statewide Advisory Committee for Public Safety Education - CSU Fresno
Richard Doshen - Representative, California Police Chiefs Association - Yuba City Police Department
Steve Hart - Deputy Director, California State Fire Marshal's Office
Ron Havner - Dean, PUblic Safety Training, Evergreen Valley College
Mary Jennings - Representative, California Professional Firefighters
Dick McGrath - Public Safety representative to the State Academic Senate - Cerritos College
Bill Ogden - representative, California State Firefighters Association Education Committee—Rancho Santiago college (ret.)
Chuck Page - Deputy Director, Standards and Training for Corrections, Board of Corrections
Jim Pope - Representative, California State Sheriff's Association - Shasta County Sheriff's Department
Frank Scotti - Southern California representative to the Statewide Advisory Committee for Public Safety Education for the California Fire Technology Directors Association - Rancho Santiago College

APPENDIX B

STATEWIDE ADVISORY COMMITTEE FOR PUBLIC SAFETY EDUCATION MEMBERS

STATEWIDE ADVISORY COMMITTEE FOR PUBLIC SAFETY EDUCATION

Project Coordinator: Fred Allen, Dean of Instruction, Area I, Butte College
Chancellor's Office Representative: Leo Ruelas, Specialist in Public Safety Education

Business/Industry Representatives

Ron Allen	Chief - Training, Delivery and Compliance	Commission on POST
Arthur Branstine	President	Westec Security, Inc.
Armand Burruel	Asst. Dep. Dir., Human Resources Devel.	California Dept. of Corrections
Paul Dempsey	Chief, Training Services Division	California Youth Authority
Steve Hart	Deputy Director	Office of the State Fire Marshal
Thomas McConnell	Director	Board of Corrections
Jim Pope	Sheriff	Shasta County Sheriff's Dept.
Oliver Thompson	Chief of Police	Inglewood Police Department
Ray Vittori	Fire Chief (ret.)	Emeryville Fire Department

Education Representatives

Ann Boyce	Assoc. Prof., Applied Sci. and Tech. Dept.	Bakersfield College
Representative: Environmental Technology/Hazardous Materials		
Kelly Chun	Dean, Public Safety Center	Sacramento City College
Max Futrell	Professor/Chair, Dept. of Criminology	CSU, Fresno
Representative: Four-year Colleges		
Ronald Havner	Dean, Public Safety Training	Evergreen Valley College
Jan Hayes	Professor, Science Division	Merced College
Stan Kephart	Director, Public Service Center	Butte Community College
Richard McGrath	Professor, Administration of Justice Dept.	Cerritos College
Representative: State Academic Senate		
Frank Patino	Division Dean, Dept. of Public Service	Rio Hondo College
Representative: California Academy Directors Association (CADA)		
Frank Scotti	Director, Fire Technology Department	Rancho Santiago College
Representative: Fire Technology Directors Association (for Southern California)		
James Smith	Professor, Administration of Justice Dept.	West Valley College
Representative: California Association of Administration of Justice Educators (CAAJE)		
John White	Coordinator/Fire Chief	Shasta College
Representative: Fire Technology Directors Association (for Northern California)		

APPENDIX C

CURRICULUM DEVELOPERS AND CONTRIBUTING REVIEWERS

CURRICULUM DEVELOPERS AND CONTRIBUTING REVIEWERS
(other than Steering and Statewide Advisory Committee members)

Dan Coffman	Rio Hondo College
Mike Collins	Fresno City College
Art Cota	State Fire Marshall's Office
Beverly Curl	Long Beach City College
Tom Feierabend	Mt. San Antonio College
Mary Girty	Allan Hancock College
Dr. Joel Gormick	Rio Hondo College
Bob Halliburton	Allan Hancock College
Don Hulse	Long Beach City College
Richard Keller	Rancho Santiago College
Terry Koeper	Southwestern College
Bill Lane	Allan Hancock College
Charlene Nagy	Miramar College
Marc Revere	Palomar College
Frank Scotti	Rancho Santiago
David Senior	Allan Hancock College
Ed Smith	Crafton Hills College
Ray Vittori	Emeryville Fire Department (ret.)
Teri Wann	Rancho Santiago College
John White	Shasta College

APPENDIX D
GENDER EQUITY/SPECIAL PROBLEMS CURRICULUM COMMENTS

ADDITIONAL INFORMATION FROM THE GENDER EQUITY/SPECIAL POPULATIONS CONSULTANT

(Mary Thorpe of Thorpe, Hendrix and Associates, an Educational Consulting Firm)

Gender Issues in the Workplace:

Although gender barriers have been broken for women in public safety careers for two decades, evidence continues to surface to indicate that women often find a hostile working environment that undermines their effectiveness in those careers. Further, problems surrounding gender can diminish the job performance of an entire department when those problems are ignored. Unresolved gender strife in the workplace can be extremely costly in fiscal terms as well. Donna Giles, Human Resource Director for the City of Sacramento, admitted that the fear of litigation, based primarily on gender discrimination and harassment, stimulated the city to hire outside consultants to conduct training sessions to teach supervisors and employees how to handle disputes and misunderstandings constructively in the Sacramento City Fire Department. The cost of the program - $100,000. Even at that price, it is a good investment if the program prevents one lawsuit. Sixty-four percent of the formal complaints filed against the Sacramento City Fire Department in the last four years involved sexual harassment.

This problem is also evident in other agencies. According to a November 17, 1994 article by Stephen Green in the Sacramento Bee, in the two years before the article was written the California Department of Corrections had the largest number of sexual harassment complaints resulting in the greatest amount of consequent cash awards of all the California state agencies. Settlements, mediation, and court awards totaled $5.15 million dollars for the two year period. Reportedly, hundreds of thousands of additional dollars were spent on investigations and legal fees.

These two examples are not unique. Men and women continue to have trouble co-existing and communicating in firehouses, correctional facilities, and squad rooms throughout the state and nation. Such friction takes its toll, and suggests that providing future public safety employees with a “strong dose” of gender equity is more cost-effective than waiting until gender-related disputes undermine both individual morale and departmental work performance.

Public Safety and Gender Issues:

Sexual harassment, sexual exploitation, and sexual violence are not about sex, but about power. Public safety employees, particularly those working in law enforcement and corrections, are trained to assume positions of power and to employ their power for the public good. However, misuse of that power, to any degree, can undermine the public trust and, carried to extreme, can ruin lives and careers.

The uniform, a symbol of authority, changes the dynamics of any interaction. New officers may not be fully aware of how the addition of the uniform or other symbols of authority, change interpersonal communication. For example, a member of the opposite sex may feel free to reject an unwanted sexual advance in a social setting — with no uniform, no gun, and no badge. But when that same advance is made by a person in uniform, it may appear to be a demand for sexual favors. There is another side of the same coin. Public safety workers may find themselves the target of unwanted sexual advances from people who want to trade sexual favors for preferential or lenient treatment. Some individuals may be tempted to be more sexually aggressive than they were before they were trained and employed in a field that expects them to seize command. These are dynamics that potential public safety employees need to understand.

Further, an understanding of the gender issues inherent in domestic violence is important, particularly for law enforcement personnel.